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NOVEMBER 29, 1941

# Railway Age

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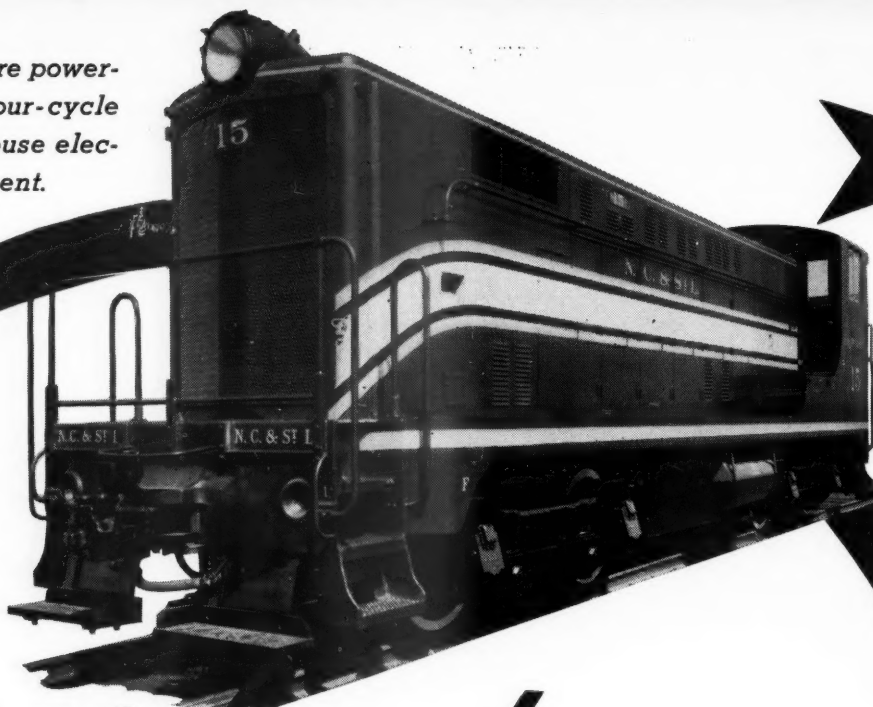
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# Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

Vol. 111

November 29, 1941

No. 22

Published every Saturday by the  
Simmons-Boardman Publishing  
Corporation, 1309 Noble Street,  
Philadelphia, Pa., with editorial  
and executive offices: 30 Church  
Street, New York, N. Y., and 105  
West Adams Street, Chicago, Ill.

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The Railway Age is a member of  
the Associated Business Papers (A.  
B. P.) and of the Audit Bureau of  
Circulations (A. B. C.)

Subscriptions, including 52 regular  
weekly issues, and special daily edi-  
tions published from time to time  
in New York, or in places other  
than New York, payable in advance  
and postage free. United States,  
U. S. possessions and Canada: 1  
year, \$6.00; 2 years, \$10.00; foreign  
countries, not including daily edi-  
tions: 1 year, \$8.00; 2 years, \$14.00.

Single copies, 25 cents each.

H. E. McCandless, Circulation  
Manager, 30 Church St., New York,  
N. Y.

## In This Issue

### Making a 72-Year Old Passenger Station Look Like New . . . . . Page 903

The recent modernization program which completely transformed the joint  
Pennsylvania-Erie structure at Mansfield, Ohio, is the subject of this article.

### Automatic Telephones Used on Illinois Central . . . . . 908

The all railroad inter-communication system installed on the Chicago Terminal  
Division and in the general offices of this road in Chicago is described in  
this article.

### New Milwaukee Box Cars Have Unusually Large Capacity . . . . . 910

A description of the welded 50-ton cars built in this road's Milwaukee shops,  
constructed primarily of low-alloy high-tensile steels and containing other im-  
portant innovations in design.

#### EDITORIAL

Rapid Economic Changes That Railroads Must Meet . . . . . 899

#### GENERAL ARTICLES

Has Competition "Leveled Off"? . . . . . 902  
Making a 72-Year Old Passenger Station Look Like New . . . . . 903  
Automatic Telephones Used on Illinois Central . . . . . 908  
New Milwaukee Box Cars Have Unusually Large Capacity . . . . . 910  
Economics Research on the I. C., by Stanley Berge . . . . . 913  
Railway Personnel Problems . . . . . 917  
Back to the Emergency Board . . . . . 921

#### COMMUNICATIONS AND BOOKS . . . . . 923

#### NEWS . . . . . 924

The Railway Age is indexed by the Industrial Arts Index and also by the  
Engineering Index Service

PRINTED IN U. S. A.





## INCREASE THE TIME FREIGHT CARS MOVE IN TRAINS



**R**ECORDS show that freight cars actually are moving in trains only a little more than ten per cent of the time, or about two hours and a half out of twenty-four. If this two and a half hours of actual movement could be increased by as little as a half hour a day it would mean an improvement of twenty per cent. Such an achievement would aid materially in expediting National Defense shipments.

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## RAILWAY AGE

# Rapid Economic Changes That Railroads Must Meet

Every industry during every day of its existence has both a short-range and a long-range trend in its affairs. In some, including the railroad industry, the short-range trends are subject to violent changes, and may be for a while so different from the long-range trend as to mislead all but thorough students as to what the long-range trend actually is. There has recently occurred in the railroad industry one of the most extreme changes of short-range trends in its history; and it has presented, to all concerned regarding the industry's future, problems the nature and magnitude of which are very difficult to appraise.

Throughout the decade 1931-1940, inclusive, railway traffic was very subnormal measured by all previous standards of volume and growth. It was so subnormal that there were constantly large surpluses of facilities, and management was freely criticised by spokesmen of government, labor unions and even other industries for having made excessive investments of capital in the '20's. Rates to some extent, and wages to a still larger extent, were fixed upon the theory that the railways had no need or right to earn a return on this "excess" capital; and the Interstate Commerce Commission, and even the courts, based numerous plans for reorganization of bankrupt railways on the assumption that no return ever could be earned on it. Even in 1940, ton-mileage of freight traffic was 17 per cent less than in 1929; gross earnings were 33 per cent less; net operating income was 46 per cent less.

Then suddenly the entire picture changed. Freight ton-mileage in the first eight months of 1941 was the largest in the first two-thirds of any year in history—299 billion as compared with 294 in the first two-thirds of 1929, and larger than in any of the *entire years* 1932, 1933, 1934, 1935 or 1938. The figures for August, which are just available, show that ton-mileage in that month exceeded that of any previous month in history; and when figures for October are available it will be shown to have topped August.

Meantime, measured by previous seasonal increases, traffic apparently had begun to slip. In June carloadings were 85.5 per cent as large as they averaged in

1925-1929, inclusive; in July, 85.1; in August, 82.5; in September, 79.6, and in October, only 79.1. But traffic was not really slipping. It was only failing to make a normal fall increase because of dilution of commercial traffic by a large and increasing amount of defense traffic. The *Railway Age* predicted that this would occur. It also predicted that after the seasonal peak had been passed there would not occur the usual seasonal decline; and that forecast also is being fulfilled. Weekly carloadings have been smaller in November than in October; but while in October they were only 79 per cent of the 1925-1929 average, in the three weeks ending with November 15 they were 84 per cent of that average. This less-than-seasonal decline doubtless will continue until January, when, with traffic substantially larger than at the beginning of 1941, there probably will begin a more-than-seasonal increase that will prevail throughout most of 1942. The railways have demonstrated that, in spite of the decline of equipment, they have been prepared in 1941 to meet unprecedented demands. The present trend of traffic indicates they must prepare as rapidly as practicable to meet substantially larger demands next year.

### Short-Term Profit No Basis for Fixed Cost Rise

But the present trend unquestionably is an abnormally upward short-range one. How long will it continue? How high will it carry traffic? And, more important still—how long will it last, and how much traffic will there be for the railways after the defense effort affords the long-range trend, which so plainly prevailed prior to 1941, opportunity to reassert itself? Different interests are making great efforts to take advantage at the expense of the railways of the present abnormal short-range upward trend. This is especially true of organized railway labor, which has rejected advances in wages for sixteen months averaging 12½ per cent recommended by an emergency board appointed by the President, and is seeking to have larger advances established permanently. The net operating income of 651 million dollars earned in the first eight

months of 1941 was only 21½ per cent less than was earned in the first two-thirds of 1929, and was at an annual rate of 1 billion, 40 million, or 4 per cent, on investment, as compared with 5½ per cent in the first two-thirds of 1929. The advances in wages recommended by the President's Board, however, would cost about 90 million in the last one-third of this year and curtail the net operating income in this one-third of the year to less than an annual rate of 3 per cent, or 780 million annually. And the still larger advances in wages upon which the labor unions are insisting and for which some of them are threatening to strike would, of course, tend to curtail net operating income still more and incidentally to curtail correspondingly the railways' ability to buy vitally needed equipment and materials.

An offset to this, the importance of which is substantial, is the probable increase in gross earnings and net earnings above the level of the last third of 1941 which will occur as long as the present abnormal short-range upward trend in traffic continues. Obviously, however, if the railways are to be deprived of opportunity to derive maximum net earnings from a maximum traffic, they will be confronted again with abnormally small net earnings if and when the large traffic, due to present abnormal and temporary causes, ceases to be available. In other words, should the labor unions get their way, and should traffic after the defense effort revert to its long-range downward trend, the railways would be confronted with a very serious situation—perhaps the most serious in their history. Whatever the outcome of the wage controversy, it is plain that while the short-range upward trend of traffic continues railway managements should be sparing no effort to prepare for adverse developments that may occur later.

#### What a Foresighted Manufacturer Advises

"We in private enterprise talk much of our initiative. Now is the time to show it. . . . When the tremendous volume and income of the defense era slump, the free enterprise system must either deliver the goods or be pushed aside."

In the above words Charles E. Wilson, president of the General Electric Company, characterizes in the November issue of the "American" magazine the job that is ahead of industrial leadership in this country—quite apart from its immediate obligation to produce and transport an unheard-of quantity of defense materials, while paying the highest wages and taxes in history. What Mr. Wilson believes industry should do is to plan ahead in such manner that, when the war crisis passes, it can proceed smoothly into the production of an equivalent quantity of peace-time goods, and avoid post-war depression and unemployment.

This is an ambitious objective, because no one industry alone—nor even a substantial minority of all industries—can attain it. The co-operation of practically all business of the kind known as "big" would be necessary. The General Electric people realize this,

and, no doubt, that is why Mr. Wilson set forth his proposal in the pages of a magazine of wide circulation. In all probability, the leaders of many businesses whose time and energy is now completely consumed in keeping production going at the present level will be inclined to the view that "sufficient unto the day is the evil thereof;" let's doctor today's headache today, and tomorrow's headache tomorrow. The irrefutable answer to that viewpoint is that the government has a large force of its bureaucrats concocting gigantic public works and other schemes, which it proposes to put into effect immediately the war crisis ends, involving further socialization of the economy and ruinous taxation for such industry as remains in private hands. Unless private industry at the war's end can demonstrate its readiness to engage in production to an extent which will provide fully as much employment as that claimed for the program of the socializers, is it not quite likely that the socializers' program will be adopted?

#### A Separate Department Necessary

The General Electric management has overcome the difficulty presented by its present concern with immediate production problems by setting up a separate department to deal with post-war planning—which is obviously what any industry *must* do, if it is going to go far in examining the shape of the future. The protest of managers that they are overworked as it is, without taking on an added chore of such magnitude, is entirely just. The government has made a specialized and full-time job for many men of its coming program of socialization, and free enterprise cannot compete against these specialists with the part-time labors of men already fully occupied. The General Electric officer who has been designated to supervise future planning is D. C. Prince, vice-president. In several addresses before engineering and other societies, he has described how he is going about his important job; and, we understand, leaders in other industries may upon request obtain copies of his analysis of the situation.

The action of the management of this great manufacturing enterprise is of importance to the railroads from at least two angles: (1) its possible effect on industrial tonnage and, hence, the post-war traffic and earnings prospects of the railroads; and (2) the suggestion it affords to carriers of methods whereby they also may do forward planning—not only to be well prepared for what lies ahead, by knowing about it in advance, but also, possibly, by participating with other private industry in an endeavor to make the post-period a prosperous one for all free enterprise, to the discouragement of further socialization.

The above statement is no mere theorizing. We have first-hand information that a number of the country's leading railroad men are interested in the approach to the future which these eminent manufacturers are advocating. Not only that, but several railroads have gone a long way along a parallel road.



In our issue of October 18, page 614, we described in a rather general way the large-scale study of present and future traffic prospects in which one large railroad has been engaged, with growing intensity, for several years. On another page in this issue is published a description of the work of the traffic research department on the Illinois Central—probably the most comprehensive set-up of its kind on any railroad in the country.

The description of the job that is being done on the Illinois Central makes it quite clear that here is no activity which can be done exclusively by traffic solicitors in their spare time. The task calls for some technical skill in economic analysis and a degree of objectivity which few "practical" men are likely to possess, without some specific training. It is equally evident that merely hiring a few academic researchers without actual railroad experience will not turn the trick either. Such men would fail sufficiently to take actual conditions into consideration to give their studies the maximum dollars-and-cents value, and they would probably also lack the confidence of the sales organization, necessary to secure the adoption of their recommendations. The railroads have no money to waste in compiling studies and reports merely to provide exercise for academic minds. The Illinois Central has striven to surmount both difficulties by making the staff of its research department a combination of the "practical" and "theoretical." That is, it has employed men trained on the outside in the technique of economic research, and has also included men with experience in its own traffic department. The thought was that the traffic men would learn research methods from the newcomers, while the latter would learn practical railroad problems from the traffic men. And that, so our author reports, is the way it has actually worked out.

### Comfortable Habit vs. Skeptical Inquiry

It is true that planning by industry on the national scale advocated by Mr. Wilson is not included in the set-up of the Illinois Central, nor yet in that of the other railroad whose work in this direction we set forth in our October 18 issue. However, the work which these and a few other railroads are doing along these lines is certainly a necessary preliminary to anything as comprehensive as the General Electric proposal. Railroad traffic—as well as railroad earnings and railroad employment—arises carload by carload, commodity by commodity, locality by locality. It could be only if the railroads knew ahead of time—not only what the details of local production were likely to be, but also how much of this production was going (or could be induced) to move by rail—that they might then come forward with a program for themselves as far-reaching as that which Mr. Wilson suggests.

There are diametrically opposed attitudes regarding management of enterprise, as for all human behavior, either of which the individual may choose. One is to follow tradition, custom and habit. The other is to observe and take thought, constantly striving to change

actions to conform more closely to changing conditions. Following tradition is the more comfortable path, and most people prefer to pursue it—but when, in any economic society, there are a lot of other people who are living according to the "take thought" attitude, the vocation which tries to continue its existence largely on a traditional or customary basis runs the risk of extinction. In the mechanical and other technical aspects of railroading, the "take thought" point of view has always been predominant. No mechanical device is ever deemed perfect; those who have produced it strive continually for its improvement, lest a competitor with a more efficient product take their customers from them. Railroad men in the operating and technical departments have constantly competed with each other, and have been assisted in their competition by the manufacturers of equipment used in these departments.

### The Scientific View on Traffic, Labor, Public

The purpose of a railroad, like any other enterprise, is to earn a profit for the owners—and for many years the obvious path toward profits was constant improvement in operating and technical materials and methods. Such improvement is just as necessary as it ever was, but it is now equally clear that this inquiring, skeptical, scientific, and competitive attitude (as opposed to the customary, the traditional) needs also to be applied intensively in the commercial, personnel, and public relations aspects of railroad management. The reason this is necessary is that profits, the production of which is management's primary responsibility, can no longer be secured merely by continued improvement in operating and technical methods and materials. Up until the decade of the 'Twenties, volume of traffic was no great concern of railroad managements; it took care of itself. Also, up to that time, while wages were rising more rapidly than earnings, they had not yet reached the point where they threatened to absorb all the fruits of increased efficiency, and then some. And it was not until the 'Thirties that the depredation of politically-combined competition assumed ruinous magnitude.

Relations with labor and the public, and price-making and production control under competitive conditions, are just as proper subjects for scientific study as steel rails, boiler water, or car trucks. There is no reason for suspecting that casting aside traditions and comfortable habits in dealing with these problems and substituting, instead, policies based upon rigorous study of the facts—would not prove just as effective and profitable in these areas as they have for a hundred years in other phases of railroad management. Indeed, is there any alternative except extinction of the railroads as free enterprise, to the adoption of a scientific approach to the problems of personnel, public relations, and pricing and production under competitive conditions? Competition, over which railroad managements have no direct control is assailing railroad profitability to the point of total destruction: (1) in labor costs, by the demagogic misinformation of railway employees;



(2) in subsidizing rival methods of transportation, by the political deception of the shipping and consuming public; (3) in drawing away from the railroads their paying traffic, by taking advantage of a rate structure which no one has ever maintained could be defended under conditions of competition. There are scientific methods of proven dependability for meeting all three of these new-day attacks on reasonable profits, which alone can long sustain the railways as private enterprise.

### A Job for the Individual Railroad

Nation-wide statistics do not have a great deal of significance for individual railroads. Careful analysis by each of its own figures would be more helpful. There is a tendency on the part of some railroad people, when some new job wants doing, to suggest that the A. A. R. do it; or perhaps even to criticize the A. A. R. because it has not already done it. But the A. A. R. cannot

tell the individual railroad what kind of water treatment or rail section is best suited to its local conditions; and it is doubtful whether any centralized body, however skillful, could correct the local conditions which are depriving individual railroads of specific customers and of the loyalty of specific employees. Study and application of scientific methods in personnel, in public relations and in competitive pricing is a managerial function which cannot be any more successfully carried on by an association than could operating trains or maintaining rolling stock or track. Association activity is, of course, a valuable adjunct to performance of this kind by individual carriers, but it cannot be a substitute therefor.

Adaptability to changing environment has always been the price of survival. When environment changes as rapidly as that surrounding private management of the railways is now changing, the mechanism for the adaptation needs to be unusually thorough and dependable.

## Has Competition "Leveled Off"?

The wily figure-men in the employ of the railway unions contended to the "emergency board" that the critical days of the railways' competitive struggle have passed—that their competitive losses have "leveled off."

There are some observers, not employed to fit statistics to a pre-ordained conclusion, who have also over-hastily announced somewhat the same opinion—with apparently only a superficial glance at the figures. For example, they congratulate themselves on certain appearances in I. C. C. Statement 4130, Fluctuations in Railway Freight Traffic Compared with Production, 1928-1940, and the I. C. C. Monthly Comment on Transportation Statistics, released November 5.

Critical examination of these two releases gives scant support to any great optimism. For example, there are those who are encouraged because the commodities grouped under Manufactures and Miscellaneous in the railroad statistics are keeping pace with increases in truck traffic.

A break-down of the Manufactures and Miscellaneous group, however, reveals a less rosy picture. The bulk of defense and lend-lease traffic is admittedly going more to railroads than to trucks. Manufactures and Miscellaneous include iron and steel products. In 1940 this traffic moving by rail was only 14 per cent under 1928, and the revenue had declined even less. But the tonnage of the remainder of the Manufactures and Miscellaneous commodities, excluding iron and steel, which was moved by rail in 1940, was 23 per cent less than in 1928.

Tobacco, cotton, fruits and vegetables, livestock, packing house and dairy products, petroleum, sugar, beverages, cotton goods, bagging, canned goods, manufactured tobacco, paints and oils, paperboard, soap and l.c.l. rail tonnage was 60 per cent of adjusted production for these commodities in 1928, but only 31.8 per cent in 1940. Relatively few of

them in 1940 showed any appreciable improvement over 1939 in ratio of rail haulage to total and most of them showed losses—and a 2 per cent total loss, notwithstanding the effect of defense and lease-lend on this character of traffic.

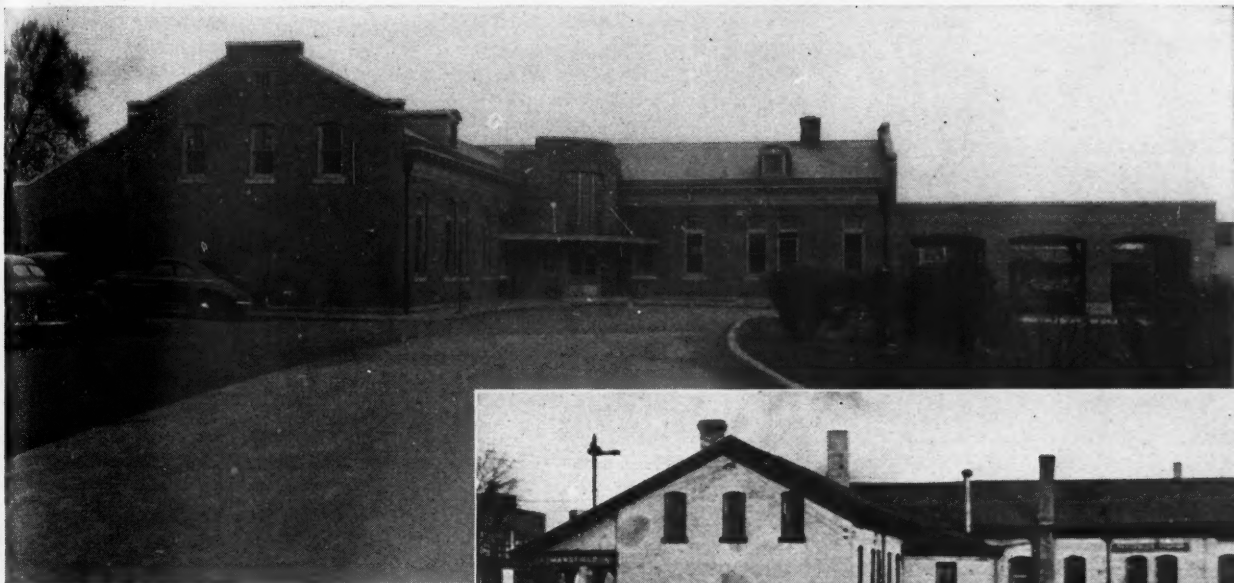
If we could conveniently segregate and deduct all defense and lease-lend materials from railroad totals, their relative position quite probably would be disclosed to be even less favorable than these comparisons indicate. The railroad participation in l.c.l. traffic was 10 per cent less in 1940 than 1939.

Railroad revenue ton-miles increased 1.6 per cent for the first 8 months of 1941 compared with 1929 and the average haul increased 10 per cent, but freight revenues decreased 11.3 per cent. While rate reductions account for part of this decrease, changes in traffic characteristics have probably been the principal factor in lower unit revenues.

Wishes, hunches and happy conviction based upon nothing more substantial than faith that everything will turn out all right in the end seem scarcely suitable devices for forward planning of a realistic kind.

There is *prima facie* evidence that the railroads are continuing to slip in their hold on the country's normal commercial traffic, and that, *proportionately*, they are relying more than their competitors on defense business for their present showing of traffic and earnings. If this suspicion be well-founded, then the burden of post-war readjustment and *liquidation* may be proportionately much greater for the railroads than for their competitors.

Disinterested analysis of existing figures would reveal whether this opinion or a more optimistic one truly reflects the facts. What light can realistic and open-minded railroad analysts shed on this question? And, if continued inroads of competition are thus revealed, what steps (including, necessarily, rate revision) are the railroads prepared to adopt to put an end to pick-and-choosing?



Above—The Rear, or Driveway, Side of the Mansfield Station As It Looks Today. Right—The Station, Viewed From the Same Angle, As It Looked Before the Modernization Program



## Making a 72-Year Old Passenger Station Look Like New

Joint Pennsylvania-Erie structure at Mansfield, Ohio, is completely transformed by modernization program

**A**S the result of a recent modernization program, the 72-year-old joint passenger station of the Pennsylvania and the Erie railroads at Mansfield, Ohio, which previously had clearly reflected its advanced age, has emerged as an attractive modern structure, Colonial in its exterior motif, with the interior rearranged and redecorated in accordance with the latest conception of railroad station design. An interesting aspect of this project is that, in its exterior appearance, the station was almost completely transformed without materially altering its general lines. Rather, the attractive exterior aspect of the modernized structure was obtained by a series of deft strokes applied to the existing structural features. On the interior the desired effect was achieved largely with the aid of modern decorative materials and through a carefully thought-out plan of rearrangement designed to effect a better utilization of the existing floor space.

This station is located in the angle formed by the crossing of the New York-Chicago main lines of both companies, the angle of intersection and the location of the station being such that the structure is located on the southerly side of both roads. About two thirds of the station area is located on Erie property, but the building is owned and maintained by the Pennsylvania, and the latter road executed and financed the modernization program.

The Mansfield station, a structure of moderate size,

was built in 1869. Not only had the passing years left their record of physical deterioration on the structure, but its architecture and layout had been rendered obsolete by changing styles in building design and new conceptions of arrangement. Moreover, these shortcomings had been rendered even more conspicuous by the presence in the vicinity of the station of a number of modern and attractive industrial buildings.

In plan, this station is in the form of a right angle, with the apex pointing toward the angle of the railroad junction. The legs or wings are of equal length, one lying along the Pennsylvania's tracks and the other along the Erie's main line. Measured along their track sides, the wings of the structure are 85 ft. 2 in. in length, while the transverse measurement is 30 ft. 2 in. in each case. On the track side of each wing, the eaves project about 13 ft. beyond the face of the structure to serve as platform canopies. Located along the Pennsylvania tracks a short distance from the passenger station is a mail and express building of frame construction. Protecting the platform area between this structure and the end of the adjacent wing of the station is a frame canopy which also extends along the track side of the mail and express building.

As originally constructed, the station was of brick-and-frame construction with a gable-type roof supported on timber trusses and covered with slate shingles. Brick chimneys projected above the roof at four different loca-





The Modernized Station, As It Appears From the Track Side. Pennsylvania Tracks at Left, Erie at Right

tions. The brick in the structure was of the common red type but it had been painted red and later a light drab color. The windows were double-hung, with multiple-pane sash, and those in the side walls were disproportionately high. Timber posts, with heavy wood knee braces at their upper ends, supported the canopies on the track side of the station.

#### Interior Facilities

Although separate waiting rooms were provided for the two roads, they had a connecting archway, and the Erie ticket office had a ticket window serving each waiting room; hence, to some extent at least, the two rooms were used jointly by patrons of both roads. Also, joint toilet rooms were provided. The wing of the structure lying adjacent to the tracks of the Pennsylvania, including the space in the apex, was occupied exclusively by that road, while the other wing was devoted principally to the facilities of the Erie. The Pennsylvania waiting room, situated in the apex of the station, was 39 ft. 3 in. by 28 ft. 5 in. in plan. The remainder of this company's wing contained the ticket office, adjacent to the waiting room, while behind this space in the wing there was an office for the assistant trainmaster, an employees' toilet room, a hallway for an employees' entrance from the track side, a stairway leading to the second floor and, at the extreme end of the structure, the Pennsylvania's baggage room.

In the Erie's wing the facilities of this company were separated from those of the Pennsylvania by the Erie ticket office, which was located at the inner end of this wing where, except for a passageway at one end, it occupied the entire width of the structure. Next to the Erie's ticket office in its wing was this road's waiting room, smaller than that of the Pennsylvania, while behind this facility were a track supervisor's office, the women's toilet room and, at the extreme end of the wing, the Erie's baggage room. The men's toilet room was located in the angle formed by the junction of the wings and was entered from the Pennsylvania's waiting room.

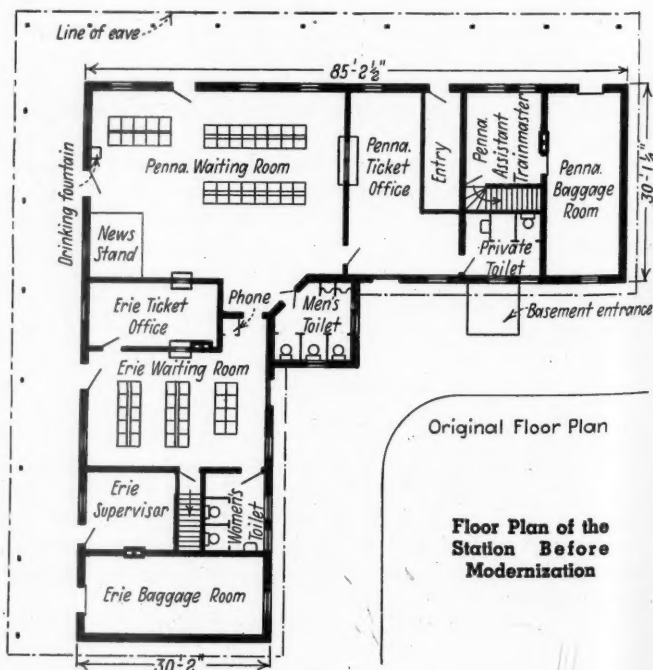
In the waiting-room areas of the building, the ceiling height was 16 ft., and in these areas there was but one story, but for a length of about 25 ft. at the outer end of each wing the height of the first-floor ceilings was reduced considerably to allow space for a second floor. In the Pennsylvania's wing, the second-floor space contained locker and lounge rooms for this road's trainmen, while the second-floor space in the Erie's wing provided office quarters for the sergeants of police of both roads. Incidentally, the first-floor windows in the side walls were of such a height as to project slightly above the second-floor level, and there were no separate windows in these walls for the latter level.

In its interior finish and appointments, the station clearly reflected the period in which it was built. All floors were of wood and the walls in the public rooms had beaded wood wainscots. Windows and doors were trimmed with "heavy" ornate wood moldings, while the settees, which were of the back-to-back type, were divided into sections by metal arm rests. The public rooms were heated by means of exposed steam radiators.

#### General Arrangement

The general arrangement also left much to be desired. As originally built, entrance doorways for the waiting rooms were provided only on the track sides of the station, while the approach for street vehicles was from the rear by means of a driveway that described a loop in the angle formed by the two wings of the station. This meant that, to gain access to the station interior, patrons must walk entirely around one wing or the other to reach the entrance doorways on the track sides. Also, it was recognized that the arrangement of the station interior, with its scattered facilities and its divided waiting rooms, was greatly in need of improvement.

There was also another aspect of the station layout that was proving objectionable. Through the station area the Pennsylvania has three main tracks, the eastward main track, a westward passenger track and a west-





Looking At a Part of the Enlarged and Modernized Waiting Room—Occupied Formerly by the Erie Ticket Office and Waiting Room



ward freight track, and in addition there is a spur track for parking two Pullman cars. Between the two westward tracks and extending along the Pullman track is an island platform for the use of westbound passengers. When westward passenger trains of the Pennsylvania pull in at the station it is necessary for them to stop short of the Erie crossing, which means that patrons getting on or off long trains at the island platform must do so at a point some distance from the station. Furthermore, since the island platform serving the westbound passenger track is located on the side of that track opposite the station, it was formerly necessary for debarking passengers to wait until their train had pulled out before they could get across the tracks to the station.

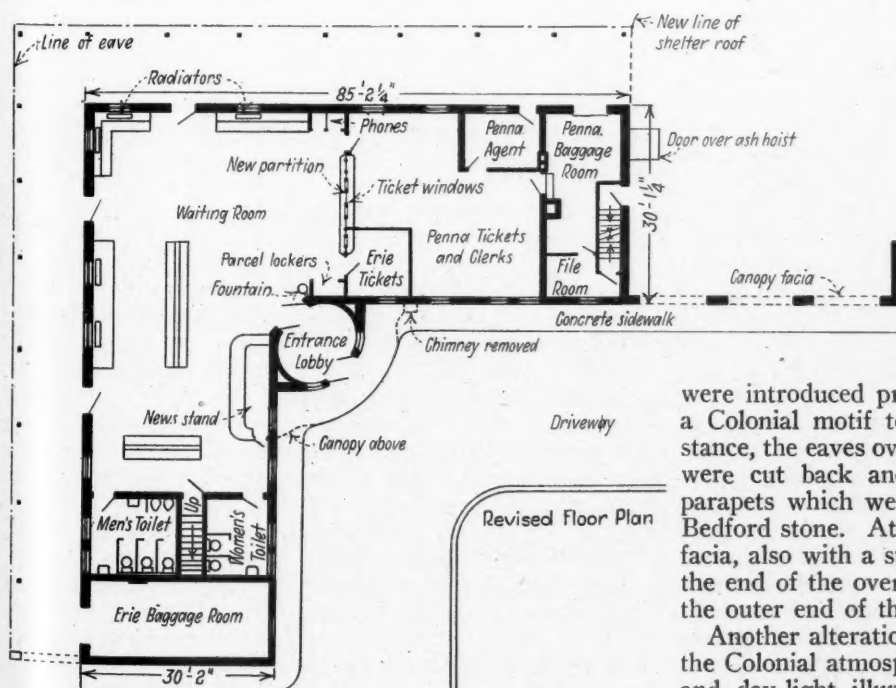
In the modernization program, these objectionable features were removed by the construction of a passenger subway under the eastward main track and the westward passenger track to the island platform, and the provision of an enclosed heated shelter on the latter platform for the use and protection of passengers waiting for westbound trains, these facilities being provided at a point about 300 ft. east of the east end of the passenger

station. The enclosed shelter is 7 ft. 10 in. by 40 ft. in plan, and, together with the stairway leading to the passenger subway, is encompassed by an open platform shelter, 107 ft. 2 in. long and 14 ft. 2 in. wide.

In general, it may be said that the station modernization program had two aspects, namely (1) the changes and improvements that were made both externally and internally for the sake of appearance, and (2) the alterations in arrangement that were introduced with the object of promoting efficiency and passenger convenience. Alterations in the latter category that were made to the station proper were confined to the interior with one important exception—a new main entrance was established at the former location of the men's toilet room in the angle formed by the junction of the two wings, thus providing direct and more convenient access to the station interior from the approach driveway.

### Exterior Alterations

Changes that were made in the station exterior will be considered first. Some of the most important of these



The Sweeping Changes That Were Made in the Interior Arrangement of the Station Are Illustrated By the New Floor Plan Shown at the Left

were introduced primarily for the purpose of imparting a Colonial motif to the architectural scheme. For instance, the eaves overhanging the end walls of both wings were cut back and the walls were built up to form parapets which were capped with copings of light gray Bedford stone. At the end wall in the Erie wing a brick fascia, also with a stone coping, was constructed to cover the end of the overhanging eave on the track side, with the outer end of the fascia supported by a brick column.

Another alteration which had the effect of augmenting the Colonial atmosphere, as well as providing ventilation and day-light illumination for the second-floor rooms,

was the introduction of dormers in the roof. Two of these were provided near the outer end of each wing, one on each slope of the roof. Each dormer on the track side of each wing contains a bank of three windows and has a flat roof, while that on the other side of each wing has a single window and a barrel roof. Still another improvement in the same category entailed the introduction of a wood entablature along the eaves of both wings on the sides facing the driveway approach. These entablatures are comprised of an ornamental wood cornice and a deep fascia board. Not only do they help to impart a colonial aspect but they also have the desired effect of reducing the apparent height of the side walls.

One of the alterations that it was desired to effect on the station exterior was to reduce the apparent height of the windows on the driveway side. This was accomplished by introducing a wood cross bar at a point near the top of each window and glazing the area above this bar with Magnalite "B" glass. The use of this type of glass also had the effect of obscuring the fact that these windows extend above the second-floor level. The sash in these windows, as well as those on the track sides of the station, were replaced with new double-hung sash, in which the upper sash in each window is of the multiple-pane type, while the lower panels are single pane to enhance visibility and to facilitate cleaning. The sash in the windows in the end walls of the wings were not renewed.

#### Other Alterations

Other structural improvements included the replacing of all the old chimneys with a single stack, the renewal of the slate-shingle roof with light green asbestos-cement cedar grain shingles, and, on the track side, the removal of the knee braces from the canopy columns and the encasing of these columns in wood sheathing. Further, a facade of brick construction was built between the end of the Pennsylvania's wing and the mail and express building on the driveway side, where it obscures the frame platform canopy that covers the area between these structures. This facade, which is topped by a stone coping similar to those on the station proper, embodies three openings, separated by brick columns that are so placed as to hide the timber columns of the frame canopy.

One of the most effective measures that was taken to improve the appearance of the station was the cleaning of the old brickwork to reveal its natural color. This was done with steam and caustic soda, after which the old brickwork was repointed. In some areas the bricks were stained as a means of blending the colors of the old and new brickwork. As a result, the exterior of the station presents a remarkably uniform aspect. Existing stonework, which included the base course and the window sills, was cleaned and dressed. With the exception of the columns on the track sides of the station, which were painted a dark red, the wood trim of the station, including the cornices, window frames and sash and the dormer trim, was painted a light gray color.

#### A New Main Entrance

The most fundamental structural change made on the exterior of the station was the construction of the new main entrance in the angle formed by the juncture of the two wings. Boldly conceived and attractive in appearance, this feature is sufficiently prominent to attract attention to itself and has the effect of doing much to alter the aspect of the entire structure. Its facade embodies a circular brick wall, convex outward, which spans between the two converging side walls of the station

proper, thereby forming an enclosure which serves as a lobby. The top of the outer wall of the facade entrance rises somewhat above the station roof and is surmounted by a stone coping.

The exterior entrance doorway in the curved facade has double doors, glazed in their upper portions, and is flanked on each side by a small window. Above the entrance doorway and following the curved line of the facade, extending from wall to wall, is a canopy of steel and frame construction, the ceiling of which is plastered and equipped with recessed lighting units with diffusing



The Ticket-Window End of the Waiting Room. New Main Entrance, Shown at Left of the News Stand, Now Gives Direct Access From Driveway Side

glass lens for illuminating the entrance area. Supporting the canopy are two metal hangers, each consisting of a twisted wrought iron rod, 1 1/8 in. square, which are anchored to the brick wall of the facade. Daylight illumination for the interior of the lobby, as well as a pleasing decorative effect, is provided by a large panel of glass blocks of the Decora pattern in the wall above the canopy. This panel is divided into three sub-panels by two vertical structural members which are faced with stainless steel. As part of the work incident to the construction of the main entrance, the driveway paving was extended and a concrete sidewalk constructed along the driveway side of both wings.

#### What Was Done Inside

Alterations that were made to the interior arrangement of the station were of a sweeping nature. Prominent among them was the shifting of the Erie ticket office to a new location and the removal of the partitions formerly enclosing this space, thereby merging the two waiting rooms into one large unit. Further, as indicated previously, the men's toilet room was removed from its old location in the interior angle formed by the intersection of the two wings to make way for the new main entrance.

The Erie ticket office was moved to a position in the Pennsylvania's wing where it occupies a separate enclosure behind a partition that divides the working space in this wing from the waiting room. Behind this partition, as before, is also located the Pennsylvania ticket office. Four ticket windows are provided, three for the latter company and one for the Erie.



Aside from the addition of the Erie's ticket office, the first-floor space in the Pennsylvania's wing behind the ticket-window partition was rearranged to make more space available for the use of its ticket sales and clerical staffs. To accomplish this, the old entrance hall and the stair well were removed, the latter to a location in the baggage room, and the space formerly occupied by the assistant trainmaster, somewhat reduced in size, was made into an office for the Pennsylvania's agent, the office of the assistant trainmaster being removed to another building. Also, a small space in the baggage room was set aside for use as a file room.

The second floor area in the Pennsylvania's wing extends over a part of the working space on the first floor, and, to give a uniform ceiling height for the latter space, a suspended ceiling was provided which was made to project somewhat beyond the ticket-window partition into the waiting room to form a soffit. As viewed from the waiting room, the ticket windows are now located at the rear of a shallow recess or alcove, the ceiling of which is formed by the soffit. At one end of this alcove is a recessed bank of parcel lockers, while at the other end is a telephone booth, also recessed in the side wall of the alcove. The ticket windows are grouped symmetrically, and the grilles are formed of cast aluminum with a satin finish, being set in between panels of decorative Barlite ribbed glass with the ribs placed vertically. Thus, a highly modernistic effect is achieved.

Displaced from its old location, the men's toilet room was removed to a new position in the space in the Erie's wing that was formerly occupied by the Erie track supervisor. In this location the men's and women's rooms are adjacent to each other, being separated by the stairway leading to the second floor, and both are reached directly from the waiting room.

Thus, it can be seen that the result of the space rearrangement has been to combine the waiting-room areas into a single large space dominated by one main entrance, to centralize the ticket sales at one location and, in general, to achieve a more efficient allocation of the available space. The program also included the provision of a new and more attractive newsstand at a location in the waiting room along the wall immediately adjacent to the main entrance.

In addition to the first-floor work, the program involved the rearrangement and modernization of the employee's facilities in both second-floor areas. This phase of the program included the provision of an office for the Erie track supervisor in the second-floor space of this company's wing, and of an office for the Pennsylvania's supervisor in the upstairs space of the other wing. Also a toilet room for employees was provided in the latter space, which, as mentioned previously, also contains locker and rest-room facilities for Pennsylvania trainmen.

### The Interior Refined

In connection with its rearrangement, the station interior was so completely renovated and modernized that practically every aspect of its former old-fashioned appearance has given way to new materials, furnishings and color schemes that represent the ultimate in present-day practices. Particular attention was accorded the waiting room. Here the plaster ceiling was replaced with 16-in. by 16-in. decorative bevel panels having a light cream shade, the walls were replastered throughout, and the floor was covered with  $\frac{3}{16}$ -in. gray marbled asphalt tile in 12-in. by 24-in. panels.

The old beaded wood wainscoting was removed and replaced with a wainscoting of Micarta in a carmine red

color, the panels of which are joined by aluminum molding strips and are backed up by  $\frac{3}{8}$ -in. Masonite board. Surmounting the wainscoting is a wood cap molding which is also painted a carmine red, while the base board is of black rubber. Micarta in the same color as the wainscoting was also used as a covering for all interior doors in the waiting room, which are edged with aluminum. All lettering required on these doors is of raised wood blocks painted an aluminum color. As an essential feature of the modernization program, all of the old ornamental wood trim around the doors and windows was removed.

Built with curved lines against one wall of the waiting room, the newsstand comprises an attractive feature of this room. Except where it is of glass, the counter fascia is covered with Micarta, trimmed in aluminum. Overhead, and following the same curved lines as the counter, is a deep fascia board of painted wood.

All the old seats in the waiting room were replaced with new settees built of solid oak with a natural finish and with stainless steel shoes on the legs. To the extent possible, the required seating capacity was provided in the form of wall seats, but it was necessary also to provide two intermediate settees, which are of the back-to-back type. The waiting room is heated by steam radiators which are concealed behind the wall settees. All hardware used throughout the first floor is chrome with a satin finish.

For the most part, the waiting room walls are painted a light warm gray. However, a modernistic touch is imparted by the fact that one end wall was painted a rose tan, this latter color also being applied to the walls in the ticket window alcove. Illumination in the waiting room is afforded by a generous number of Westinghouse decorated Luminaire suspended lights; for lighting the ticket window alcove a number of recessed lighting units with diffusing glass lens are provided in the soffit.

### Details of Main Entrance

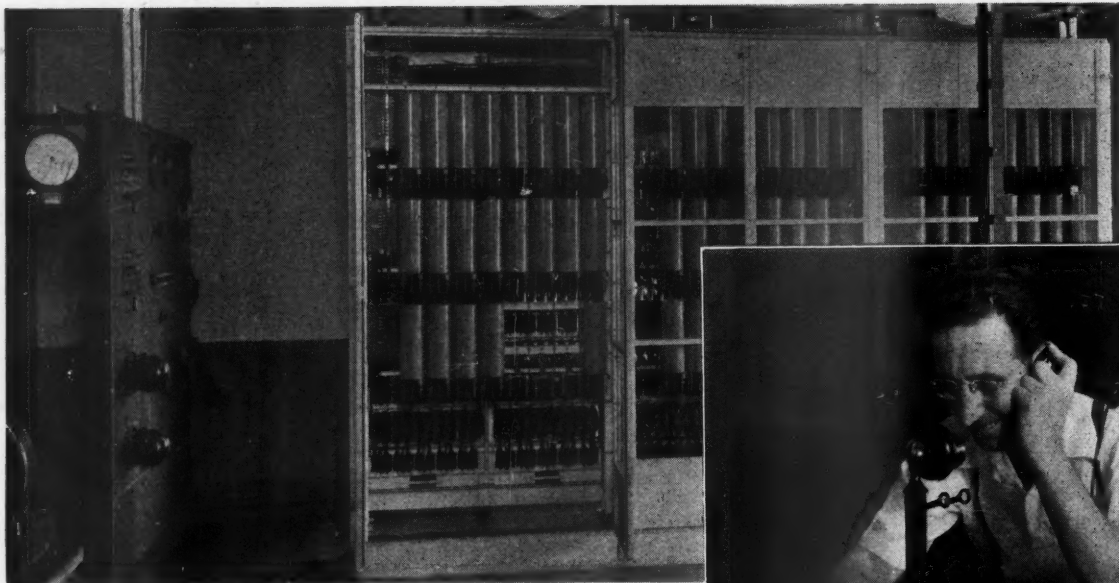
Located as it is at the inner angle formed by the junction of the two wings, the main entrance is in a position to dominate the waiting room. Access from the lobby to the waiting room is provided by a set of double doors, which are glazed in their upper portions. Directly above the main entrance there is a large multiple-paned area of glass, also opening into the lobby, which serves the purpose of transmitting light to the waiting room from the glass-block window in the outer wall of the lobby.

In plan, the lobby is elliptical in shape, and, like the waiting room, has plaster walls and a Micarta wainscoting. The ceiling is also of plaster. An especially attractive feature of the lobby is the terrazzo floor, in the center of which is inlaid a geometrical design consisting of a four-pointed star super-imposed on a square and a circle. To obtain this design, terrazzo of different colors was employed and aluminum strips were used to form the lines. Heat for the lobby is provided by two convector-type radiators concealed back of the Micarta wainscot, one of which is located at each end of the oval in the triangular space behind the curved lobby wall. The lobby is lighted at night by a single Westinghouse Magnalux indirect lighting fixture suspended from the ceiling, producing a soft lighting effect within the lobby. Also, the play of light on the glass blocks is very effective, as viewed from the exterior.

As modernized, both public toilet rooms in the station have plaster walls and ceilings painted a rose tan, wainscotings of pink decorative Flexboard, and asphalt-tile floors in the same marbled pattern used in the waiting

(Continued on page 916)





Left— Automatic Telephone Exchange Equipment In the Office At Markham Yards. Below— Telephones Are Provided At All Offices and Locations Where Needed



## Automatic Telephones Used on Illinois Central

All railroad inter-communication on Chicago Terminal Division handled by private system which, with minimum operating expense, has capacity for peaks

**I**N the general offices of the Illinois Central at Chicago, as well as throughout the Chicago Terminal area, all telephone communication between members of the Illinois Central organization is handled over a railroad-owned private automatic telephone exchange system. The area involved extends from the yards just south of the Chicago river, southward 34 miles to Monee, westward 15 miles to Broadview, and south on the South Chicago and Blue Island branches. It includes 54 miles of lines, involving 253 miles of main tracks and 334 miles of yard and other tracks. Approximately 8,000 persons are regularly employed by the Illinois Central in this area.

A total of 1,369 telephones are connected in this inter-communication system. Insofar as time and energy can be saved by telephone conversations, the basic objective of this system is to make telephone communication available between any two persons, regardless of their locations in various offices or out on the line. A telephone, connected to the automatic system, is provided on the desk or in the office of every person who may have occasion to converse with any other railroad employee on the entire terminal area. Likewise, telephones are provided in all stations and on station platforms, as well as at many of the outlying hand-throw main-line switches and at each of the principal signal bridge locations. Loud-sounding bells or horns are provided on the telephones at outdoor locations, so that any employee working in the vicinity can be called. In numerous instances cars are interchanged at frequent intervals between yards

of the Illinois Central and yards of other connecting roads in the Chicago area. In order to facilitate communication concerning such matters, telephones connected to the Illinois Central automatic system are provided in the offices of certain yards on other roads.

Thus, in this railroad-owned automatic system, telephones can be justified at all locations where they may be used regularly or only in emergencies, this being true because the expense for maintenance and operation of the telephone service is not heavy and does not increase in direct proportion to the number of telephones provided. With plenty of telephones and automatic exchange equipment capable of handling calls promptly, all phases of railroad operations are expedited. Men of supervisory capacity can keep in touch with their employees throughout the entire area, which is a decided aid to efficient and economical supervision, especially in cases of emergency.

### "Inside" and "Outside" Telephones

The telephones connected to this private automatic system are for communication between persons "inside" the Illinois Central organization only. Other telephones connected through manually-operated boards are provided in the railroad offices for communication with parties "outside" the railroad organization. At first thought this might seem to be an unjustified duplication of telephone equipment, but such is not the case. Only

842 telephones, arranged for connections to outside parties, are required, as compared with 1,369 telephones in the railroad inter-communication system. In terms of conversations, about 15 per cent of the total number are with outside parties, as compared with 85 per cent between parties on the railroad.

Traffic department representatives as well as others who have business with the general public are provided with "outside" as well as "railroad" telephones. When a shipper or prospective passenger requests information from a traffic representative, which requires a second conversation within the railroad organization, the outside party is requested to hold the line while the representative obtains the information over the railroad telephone system. The result is that the outside party gets his answer promptly, without breaking his connection or waiting for the traffic man to call him back.

In addition to the outside telephones in the traffic department, such telephones are provided in the offices of various officers who communicate frequently with outside parties. The outside telephones are of the automatic type, and when a person wants to make a call he asks the operator at the Illinois Central manual board for an outside line, after which the person making the call dials the number wanted. Another justification for the railroad inter-communication facilities, separate from the outside telephones, is that the railroad system must be capable of handling peak volumes of calls without in any

the calls per telephone for a month may average about 360 in the general offices, but this average is 739 in the Markham yard area. Telephones in some offices may be used only during regular office hours, whereas the telephones in yard offices and roundhouses are used at practically the same rate throughout the 24 hours. The total number of calls handled by the system as a whole increases during a week to a maximum on Friday. On one occasion during a snowstorm, 9,000 calls were handled by 150 telephones in a 24-hr. period. On the system as a whole, during a peak demand of two hours duration, 1,800 calls were handled in excess of the normal average for that period. An average of 430,000 calls are handled by the system in a normal month, although when a few peak days were included, this total has exceeded 500,000 calls.

Thus the variations in demands for telephone communication can be met at any time by the automatic telephone system, without delays and without attention on the part of attendants or manual operators. Obviously if manually-operated exchanges were used, it would be impossible to call in a sufficient number of operators to handle unexpected peak requirements for telephone service brought about by an emergency or by train congestion in a terminal such as that at Randolph street when trains depart on 30-sec. headway during peak periods. Such sudden peak demands for telephone communication are peculiar to railroad operating conditions, and the installation on the Illinois Central was designed and is maintained to meet such demands so that the only circumstance which prevents a party from being connected to the party being called is that the telephone being called is in use.

#### Four Automatic Exchanges

In the Chicago Terminal area the railroad inter-communication telephone system includes four automatic exchanges. The Central exchange in the general office building at 12th street serves 663 telephones, about 400 of which are in the general offices and passenger station building, and the remaining 263 telephones at various locations between the Chicago river and 26th street. A second automatic exchange in the Woodlawn Station building serves 308 telephones located in offices and in the Illinois Central hospital in that vicinity, as well as at various points between 26th and 75th streets on the main line and on the South Chicago branch. The Burnside exchange at 95th street serves 180 telephones in the shops and at various locations between 75th street and 130th street on the main line as well as on the branch line to Blue Island, Ill. The fourth automatic exchange at Markham classification yards serves 218 telephones in these yards, as well as between 130th street on the north and Monee, Ill., on the south. The telephones and the automatic equipment in these four exchanges were manufactured by the Automatic Electric Company, Chicago. Although the private automatic system includes four exchanges, the users of the telephones are not aware of this fact because the exchanges are inter-connected as one composite system. Each telephone is assigned a number consisting of four digits. Regardless of whether the station being called for is for a telephone in the same or a different exchange, the connections are completed by dialing only four digits.

One factor in determining the capacity of this telephone system, as a whole, is the number of circuits, otherwise known as trunks, between the four exchanges. In a typical month when 239,219 calls were made from

(Continued on page 912)



Sketch Showing the Location of the Four Automatic Telephone Exchanges With Reference to the Territory Served in the Chicago Terminal Area

way interfering with the outside telephones used for conversations with the public.

#### Variations in Number of Calls

In an automatic telephone system of this character, maximum capacity is available at all times. Some of the telephones, such as in the car service bureau, may be busy a large percentage of the time, while telephones at outlying points, which were provided primarily for emergencies, are used only in such instances. For example,





Milwaukee 50-Ton Box Car

## New Milwaukee Box Cars Have Unusually Large Capacity

Other important innovations in design are included in 500 welded 50-ton cars built primarily of low-alloy high-tensile steels

**F**IVE hundred 50-ton box cars, recently built at the Milwaukee shops of the Chicago, Milwaukee, St. Paul & Pacific, are entirely fabricated by welding and include a number of other interesting features in construction aside from being about the largest 50-ft. 6-in. box car possible to build within the A. A. R. clearance limits. The light weight of the car is 48,200 lb. and the cubic capacity, 5,157 cu. ft., the ratio of load limit to gross load being 71.5 per cent and the ratio of light weight to cubic capacity, 9.35 lb. per cu. ft., these figures presenting a graphic picture of what has been accomplished in the new design.

Among other features of special interest are the following: Leak-proof side doors, mounted in rigid steel frames which are welded as units into the car sides and give increased strength at a point where it is greatly needed; 2-piece car ends and narrow adjoining side pans, also pre-fabricated and welded into strong structural units; car floor between the doorways protected against wear by a perforated steel plate and sealer; plywood inside lining panels 54 in. wide at the doorways readily renewable when damaged; individual floor boards which also may be renewed without disturbing the side lining; easily removable clean-out boards to permit thorough blowing out back of the lining at both sides and ends; nailing post positions inside the car indicated by vertical rows of dashes burned into every other lining board by means of an electric marker.

The 500 new 50-ton box cars have been constructed by the Milwaukee to meet an increasing demand for box cars of this capacity, not equipped with automobile loading devices, but adapted for the general loading of finished lumber, wood pulp, plywood and mill products, originating primarily in the Northwest. In addition, these 50-ft. 6-in. cars are required for the loading of light, bulky commodities, such as electric refrigerators, radios, furniture, cereals, tinware and empty cans and for mixed commodities which, to prevent damage, cannot be loaded high. The all-commodity freight rate to the Pacific Coast, which prescribes a carload minimum of 30,000 lb. without regard to size of car, also causes shippers using this rate to insist upon being supplied with 50-ft. cars.

### Principal Materials and Equipment

The new box car design embodies the familiar Milwaukee construction with horizontal-rib side sheet strips united by spot welding. The car sides, ends and posts are made of U. S. S. Cor-Ten steel, the center sill being a special composition steel supplied by the Inland Steel Company. The door pans and corner pans are pressings made of both Yoloy and Nax low-alloy high tensile steels.

Youngstown side doors are installed and also Standard car roofs and ends. The order for draft gears was divided between five manufacturers. The Bettendorf



truck sides and bolsters are designed to incorporate the truck stabilizing device supplied by the Standard Car Truck Company. Stucki side bearings are installed, also Schaefer brake hangers, Creco brake beams and bottom rod supports and uncoupling mechanism supplied by the Standard Railway Equipment Company.

The bolster center filler and rear draft lug casting, which is another feature of the design of this car, is also supplied by the Bettendorf Company which furnishes the lumber door. The order for couplers and yokes was divided between Buckeye and Gould. Westinghouse Type-AB air brake equipment is installed, also hand brakes of Equipco and Universal types. The car wheels

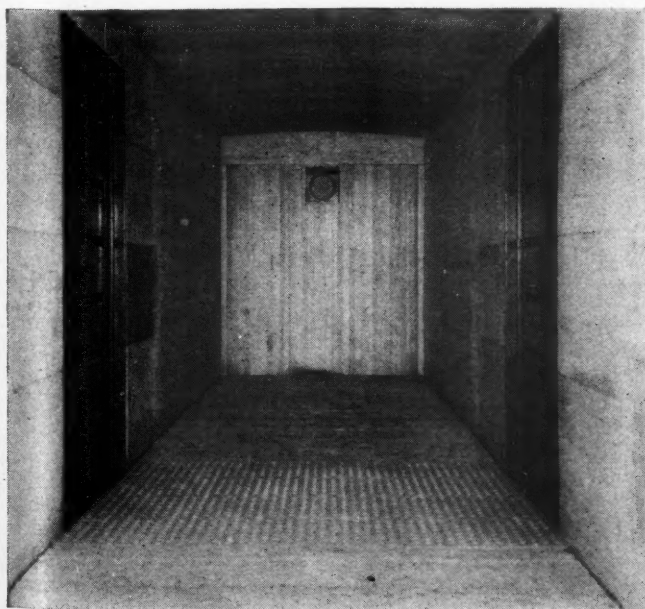
#### General Dimensions and Weights of New Milwaukee 50-Ton Box Cars

Length over striking castings, ft.-in.	51-7½
Inside length, ft.-in.	50-6
Inside width, ft.-in.	9-6
Inside height at center, ft.-in.	11-¼
Inside height at eaves, ft.-in.	10-9
Distance between truck centers, ft.-in.	40-7½
Width over side sheets, ft.-in.	10-1½
Width over side plates, ft.-in.	10-1½/16
Width over roof sheets, ft.-in.	9-8¾
Width over side sills, ft.-in.	9-11½
Height—top of rail to top of floor, ft.-in.	3-7
Height—top of rail to running board—steel, ft.-in.	15-9½
Height—top of rail to eaves, ft.-in.	14-4½/16
Width over door roller housings—Camel door, ft.-in.	10-8
Side door opening, ft.-in.	9-6¾ high by 6-0 wide
End door opening A end, in.	16 high by 18½ wide
Width over side ladders, ft.-in.	10-7¾
Light weight, lb.	48,200
Load limit, lb.	120,800
Capacity, cu. ft.	5,157
Ratio load limit to gross load, per cent.	71.5
Ratio light weight to capacity, lb. per cu. ft.	9.35

are cast iron, manufactured at the Milwaukee foundry. Plywood for the ceiling and top end pieces was supplied by the Harbor Plywood Corporation. Side and end lining, also floor boards are of Douglas fir. The defect card holder is the Railway Products Company's design.

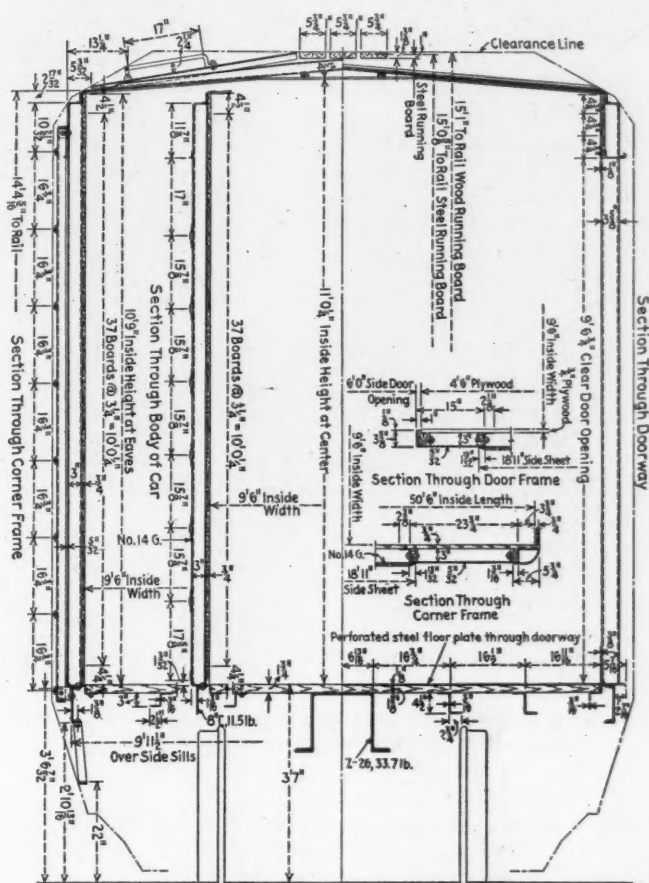
#### Large Capacity Secured Primarily by Increased Car Width

Referring to the table of dimensions, it will be noted that the limiting width in this car, as in practically all



Interior of the Car—The Prefabricated Floor at the Doorways Is Surfaced with Perforated Steel Wear Plates

other box cars, is the width over door roller housings. The increased capacity in this instance is secured primarily by revising the side door and door fixture construction so as to permit designing the car four inches wider on the inside than is the case with the A. A. R.



Cross-sections and Sectional Details of the Milwaukee 50-Ton Box Car

standard car. The rollers in this design are placed underneath the door and the Camel door fixtures and operating mechanism are redesigned for a minimum projection beyond the outer door surface. The outer surfaces of the side sheets also are spaced so as to bring the width over side ladders just within the required limit.

The capacity of the car is also increased by raising the car roof as high as practicable to give an inside height at the eaves of 10 ft. 9 in. and at the center of 11 ft. ¼ in. Referring to the drawing, it will be observed how both the roof and side construction are designed to fit just within the A. A. R. clearance lines. Increased roof height is made possible by the use of a ¾ in. safety steel tread plate instead of the conventional running board, and applying the later running board with only ¼ in. increase between the roof sheet and the bottom of the running board, flanged edges being placed in the lower connection of the roof for stiffness.

#### How the Cars Are Constructed

The new Milwaukee box cars were turned out of the shop at the rate of seven cars a day, the assembly line making one move every 68 min. The principal electric welding machines used in building this type of car include a large hydromatic spot welder, a pedestal spot welder, a series welder, and numerous machines with leads for individual welding operators. The various



The Car Underframe and Side Frame Construction—The Prefabricated Center Floor Section Is Being Applied

parts of the car, such as underframes, sides, ends, roofs, etc., are fabricated as units and located at the proper position for use in the assembly line.

In the construction of the underframe, for example, the center and side sills are delivered to the erecting shop and punched on a machine adjacent to the underframe jig. The center-sill sections and related parts are assembled in a jig as are the side sills, bolsters, and cross-bearers. The entire underframe is welded at one position, then turned upside down for finish welding and the application of piping, draft gear, and brake equipment.

The side sections and door frame are fabricated separately by welding, then assembled in a jig to form a single car side. The car ends and the roof are assembled in special jigs and, in the case of the roof, the related parts, such as running boards, are assembled while in the jig.

The cars are assembled on the erecting line at four positions, at the first of which the fitting-up is done, then the tack welding, and at the last two the finish welding. At the completion of this work the car then moves outside the shop to the spray booth where the underframe and inside are primed.

On returning to the shop at the wood track, the rest of the car floor is laid and bolted. The nailing posts and door plywood panels are applied, the latter being made just wide enough so that two 19-ft. lengths of tongue-and-groove lumber will complete the side lining. The side lining includes lower and upper clean-out boards and is toe-nailed so that no nail heads are exposed to work out.

The end lining includes side clean-out boards and a top plywood piece.

A special moisture-proof floor sealer is applied over

the steel wear plate at the car doors, and the joint between the car sides and end and the floor is also effectively sealed against the entrance of moisture at this critical point.

## Automatic Telephones Used on Illinois Central

(Continued from page 909)

telephones in the Central exchange, only 22.6 per cent of these calls required the use of trunks to other exchanges, whereas of the 98,892 calls made through the Woodlawn exchange, 55.4 per cent were trunked, and of the 65,163 calls through the Burnside exchange, 61 per cent were trunked.

Each trunk consists of a pair of wires which can be used when establishing a call in either direction. Eleven such trunks extend between Central and Woodlawn, 9 between Central and Burnside, 8 between Central and Markham, 6 between Woodlawn and Burnside, 5 between Woodlawn and Markham, and 6 between Burnside and Markham. Automatic counters record the number of calls handled over these trunks. If the traffic increases to such an extent that calls cannot be completed because all the trunks between any two exchanges are busy, additional trunks can be cut into service. If the demand for trunks ever increases beyond the number of pairs of wires available in the cables, additional capacity can be obtained by using the existing quadded conductors for phantom service, providing 50 per cent additional service, or these trunks may be "composited," thus permitting three calls and conversations simultaneously over a total of two pairs of wires.

### Maintenance to Render Reliable Service

As an important factor contributing to the reliability of the telephone service, this system is tested regularly and is well maintained so that actual failures of apparatus are relatively few. All the trunks between exchanges are given a service test before office hours each morning. By use of a test set in an exchange, the maintainer can determine whether a call can be completed through to any telephone, and tests of this nature are made frequently, especially to the outdoor telephones at outlying locations.

No one has any hesitancy in reporting a failure to complete a call.

In a recent month in which 429,235 calls were completed, there were only 112 instances in which failure to complete a call was reported. Two of these failures were the result of a receiver having been left off the hook, and in 20 instances the connections were O. K. on test, which points to the possibility that the party failed to dial properly. Fourteen of the 90 actual failures of equipment in the month were due to the operation of protective devices such as arresters. This left only 76 failures which could properly be charged to faulty design or maintenance. Of this total, 18 of the failures were in cables outside the exchanges, 10 were in line and drop wires, 41 were in the telephone sets including cords, and only 7 failures were in the exchange apparatus.

In the Woodlawn exchange, serving 308 telephones, there were a total of 21 cases of trouble during the typical month. An average of 321 calls were made on each telephone, the cases of trouble per telephone were 0.068, and the calls made per each case of trouble were 4,709. For the system as a whole, the calls per each case of trouble were 3,882.

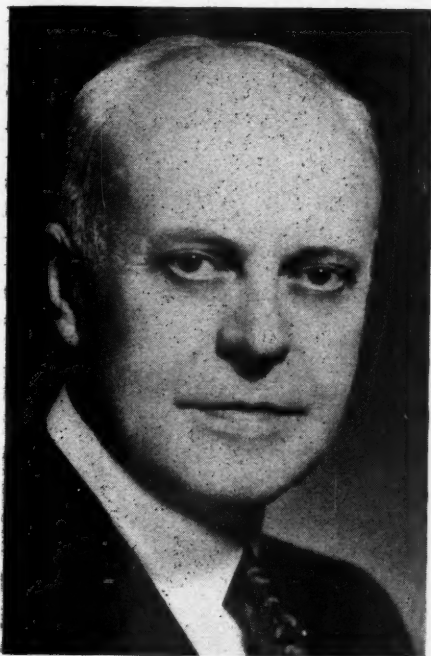


# Economic Research on the I. C.

Company stresses importance of practical application of its studies—Trends of each class of traffic being examined—Textbooks compiled for employee education

By Stanley Berge

Manager of Traffic Research, Illinois Central



Research Work Is Under the Direction of F. H. Law, the Vice-President in Charge of Traffic

**I**LLINOIS CENTRAL economic or commercial research began experimentally in January, 1934, when a small staff of men was established, free of routine responsibility, for the exploration of opportunities to improve freight and passenger service and strengthen the usefulness of the railroad in the territory which it serves. By 1936 the management considered the experiment a success, and in that year reorganized the research bureau along somewhat broader lines—creating a balanced staff, including experienced men drawn from the traffic department and several young men from outside the railroad with university training in research methods and some practical business experience. This balanced personnel has proved very satisfactory in the conduct of Illinois Central research, as the men drawn from the traffic organization have developed a knowledge of research technique, while the analysts employed from outside the railroad have been acquiring an understanding of railroad operation.

The function of the Research and Development Bureau of the Illinois Central System is to do three things: (1) Find facts, (2) Organize facts, and (3) Interpret facts. This is illustrated by the form and content of the bureau's reports which nearly always consist of four parts in the following order: (1) Purpose of the investigation, (2) Method of analysis and sources of information; (3) Findings—which constitute the main body of the report, and (4) Conclusions and recom-

mendations. Thus, no matter what subject is being analyzed, the executive for whom the study is being made finds a logical sequence which is easily followed and maintains his confidence in the information presented.

## Research Should Be on a Full-Time Basis

Analytical work and the preparation of comprehensive studies to guide management policy has long been practiced by the railroad industry. A railroad would not think of establishing a new freight or passenger train or taking one off without some individual or group of individuals in the organization making a thorough study beforehand; a railroad would not think of making a major adjustment in freight rates or passenger fares without the aid of careful analysis; a railroad, in fact, is far too large and important a business enterprise to undertake any major change in policy or practice without certain responsible individuals in the organization doing a lot of research. While such analytical work is nothing new in the railroad business, the establishment of a full-time commercial research staff as specialized and distinct part of the railroad organization is a relatively recent development. The idea is simply this:

If analytical work is important to railroad management, why not have a research staff or at least one full-time analyst as a permanent part of the railroad organization? If research is important to the solution of many railroad problems, why should it be assigned to members of the already highly preoccupied staff on a part-time, "Do-it-when-you-can" basis? Hence, it is not surprising that many railroad managements in recent years have been setting up full-time research bureaus on a permanent basis, consisting of one man or several, depending upon the size of the organization. Some of these research departments are recognized as such by name in the official organization chart of their respective railroads. Other railroads admit they are doing a large amount of economic research without any "research department" being established. It is of little consequence whether the full-time research staff carries official recognition as such, except perhaps that where such a department is well-known both within the railroad organization and by the general public, the railroad industry will receive due credit for its progressive effort in this direction. In other words, if the railroads are conducting economic research equal in quality to that of various other industries, why should they hide the fact?

## Railroad Research Should Be Practical

The word "research" has received an unfavorable reputation in some quarters and it is not surprising that business men and the general public are often skeptical

as to the practicality and value of much *so-called research*. Railroads cannot afford to maintain slipshod, unscientific, misdirected research work which, because of its faulty methods, may produce voluminous reports reaching no practical conclusions. Also, research studies should contain something more than "painful elaboration of the obvious." The modern railroad is a hard-headed business and rightfully so, which means that its research work must also be hard-headed and thoroughly practical. Three things are of considerable importance—(1) selection of suitable subjects for investigation, (2) careful selection and guidance of a qualified research staff, and (3) an effective system for transforming the recommendations into actions which will yield the greatest results.

Considerable care must be devoted to the selection of suitable subjects for investigation. Traffic matters of regular routine are not considered within the province of Illinois Central research activities. Instead, subjects which require more or less extended and exhaustive investigation are analyzed and presented in comprehensive reports which are submitted to the Freight Traffic Manager-Commercial, who has immediate supervision over the bureau, as well as to the Vice-President and other officers of the company for consideration and such action as they deem appropriate. The research reports provide a factual basis for executive decisions, particularly when broad long-term policy is involved.

At the direction of the management, the bureau is constantly adding to its list of new subjects for research.

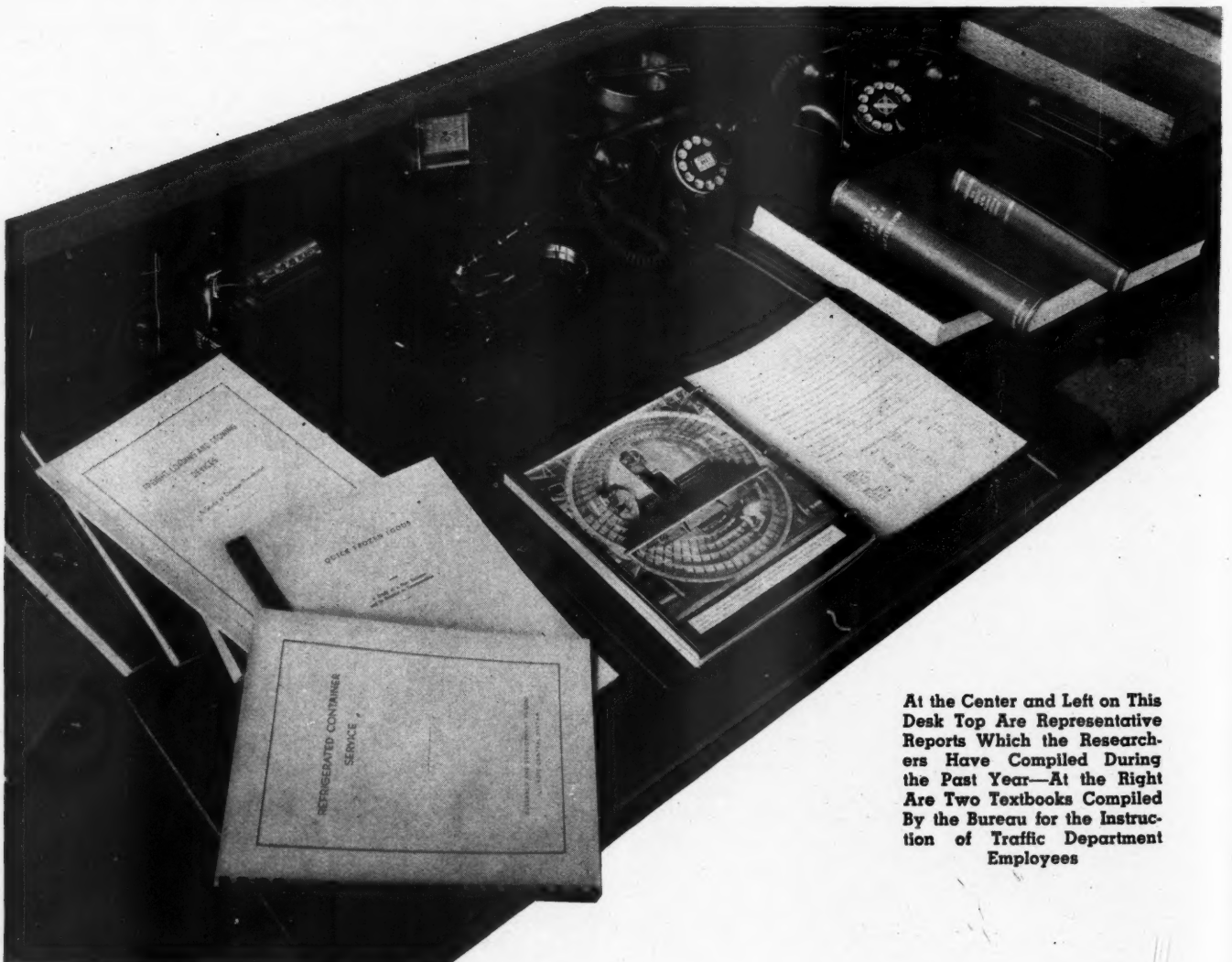
The majority of the subjects analyzed to date have been originally suggested by officers of the traffic department. However, suggestions are sometimes received from the shipping and traveling public and often the research staff itself in the course of its work discovers new fields worthy of investigation. An important part of the bureau's work is to maintain a constant watch over new developments in transportation and new trends in industry.

#### Variety of Subjects Investigated

While there has been no attempt to confine Illinois Central economic research within any fixed range of topics, it is possible to classify nearly all investigations to date into six general groups:

(1) *Developmental Surveys*, both agricultural and industrial, to promote new industries and traffic. Examples of such surveys are: "Beef Cattle Development," "Soy Bean Development," and "Quick Frozen Foods." The latter is a rather detailed study of this new industry which requires special low temperature transportation service. In this developmental research the bureau confines itself purely to the economic or traffic aspects, as the railroad employs specialized Agricultural and Industrial Departments to take charge of the technical problems. The duty of the Research Bureau is to provide comprehensive research for the assistance of Illinois Central development work.

(2) *Commodity Surveys* analyze important freight



At the Center and Left on This Desk Top Are Representative Reports Which the Researchers Have Compiled During the Past Year—At the Right Are Two Textbooks Compiled By the Bureau for the Instruction of Traffic Department Employees





A Corner in the Research Department's Office—Seated Beneath the Picture on the Wall, at the Rear, Is the Author of This Article

commodities as to traffic flow and trend, rates and service. Examples of these are: "Dairy Products and Poultry," "Rubber Tires," "Beer," "Fluorspar," "Brick," "Household Goods," "Livestock," "Fresh Meats and Packinghouse Products," and "Petroleum." At the present time the bureau is engaged on a long-term traffic survey of all major commodities of the company's traffic during the past 25 years.

(3) *Traffic and Market Surveys*, passenger and freight, have been made of portions of main line, branch lines and on-line communities. The management finds that it pays every now and then to put the magnifying glass on the traffic of a given portion of the railroad or a given on-line community. Detailed market surveys have been made of a number of sections of Illinois Central main lines as well as several branch lines. Passenger traffic surveys have been made of certain portions of the railroad and a start has been made on a relatively new type of transportation survey—the "on-line community survey," in which all available data are assembled regarding a given town.

(4) *Advertising and Sales Promotion Studies* have reviewed methods and media of advertising, territorial sales organization, sales contests and the like. Examples of these are: "Passenger Advertising in Newspapers—Typography and Layout," "Personal Interview Advertising Survey," "Freight Territorial Directory" and "Station Sales Contest." Many other subjects along this line have suggested themselves and will no doubt be undertaken in the future.

(5) *Competition and Co-ordination Studies* have investigated the development and present effects of competitive transportation and proposed methods of meeting, surpassing, or co-ordinating with such competition. Several localized studies have investigated truck, bus, barge and pipeline competition. In the direction of co-

ordination, the bureau has prepared a study of "Air Freight," in which the possibilities of co-ordinating air freight transportation with efficient ground operations were explored.

(6) *Equipment and Service Studies* have been undertaken to develop the economic possibilities of improved equipment and service. An illustration of this type of study is a recent report on "Refrigerated Container Service." Also, not long ago the bureau issued a report on "Freight Loading and Stowing Devices." The management has assigned many other studies of this nature to be undertaken by the bureau in the future.

#### Selection and Training of Research Personnel

The quality of research work depends upon the quality of the research staff. Effort must be constantly directed toward the selection and training of an efficient personnel. The Illinois Central bureau currently includes a force of twelve men, of which five were drawn from the existing railroad organization and seven selected from outside the railroad. Nine of these men are presently employed as "analysts" and three perform clerical and statistical duties. In addition, two young women are members of the research staff performing stenographic work. Normally, the staff is not as large as this, but at the present time it has been expanded to speed the completion of a large project. The researchers selected from the railroad organization were chosen for their specialized knowledge and open-minded attitude. Those from outside were required to measure up to high standards of education and resourcefulness. Stated simply, *research is resourcefulness* and the ideal research man is one who can combine painstaking accuracy with imaginative interpretation.

Each man on the research staff is trained to assume

complete responsibility for the analysis and reporting of a single subject or part of a subject. The bureau realizes that if its recommendations are not adopted by the management, the fault rests entirely with itself. Either its analysis was inadequate or its recommendations unsound or not presented effectively. This attitude of self-criticism tends steadily to improve the quality of reports and the measurable "dollars and cents" results are growing accordingly.

### Transforming Research Into Results

The test of research is in its practical results. Good research moves someone to act—if not exactly as recommended, at least in such a way as to accomplish an equally desirable result. Research studies must be "merchandised" as carefully as a store's offerings to its customers; they must be presented in the right way at the right time.

To dramatize its reports, the Illinois Central Research and Development Bureau has employed, first and foremost, a readable simple style of writing, generously garnished with "newspaper style" subheadings. In the second place, the report itself is made attractive by means of artistic covers, graphs and charts in colored inks, full page photographs and plastic bindings. However, while such modern techniques are employed, the embellishment is not allowed to exceed good taste and relative economy.

However, in spite of attractive "packaging," lengthy reports sometimes need brief oral presentation to accomplish their purpose. Consequently, at the suggestion of the management, the bureau is now developing a method of oral presentation of certain studies. This method is particularly suited to the type of study in which color photography has been used to record certain data which can be presented best in that way. In one economic analysis of a segment of Illinois Central System lines over 80 Kodachrome 35 mm. slides were prepared by the bureau for projection on the screen before interested officers of the company. Such *visual presentation*, accompanied by well organized oral and written reports, permits the research staff in a very few minutes to place before busy railroad officers the extensive economic data which must be understood if railroad problems are to be solved.

When research is well done and well presented, there is very little difficulty in receiving acceptance on the part of management. The plan now in effect of holding periodic oral discussions between the Research Bureau and the Vice-President and other officers permits all angles of a given situation to be satisfactorily ironed out. Often the Research Bureau is requested to prepare a follow-up or supplemental report to incorporate any changes that may have occurred in the situation. Also, the bureau is sometimes asked to supervise a localized or limited test of its recommendations. This may be the case where a certain improvement in service or equipment is recommended. It is at this point that economic research bridges over into *technical research* in which the railroad industry has made notable progress.

### Research Aids Training Program

A by-product of Illinois Central research work has been the development of various educational materials for use in the training of new employees. For example, the bureau has compiled two textbooks, the first being a 526-page illustrated volume entitled, *Organization and Traffic of the Illinois Central System*, published and released to the public in December, 1938, and the second

being *Rates, Service and Solicitation*, a 363-page mimeographed book for the confidential use of employees, just completed and which is currently the basis of weekly classes conducted during working hours for the benefit of new employees in the Traffic Department.

Thus, railroad research reaches into many productive fields of endeavor. What has been done to date is only a small start—only a scratching of the surface, so to speak. However, experience has shown that full-time economic research can produce profitable results in the railroad industry.

## Making a 72-Year Old Passenger Station Look Like New

(Continued from page 907)

room. All fixtures in the men's room are new, but those in the women's room were not disturbed. In the ticket sales and agent's offices, the finish includes plaster walls and ceilings, Flexboard wainscotings and asphalt-tile floors, the latter having a dark maroon color. The walls are painted a flesh color while the ceilings have a warm cream shade.

Included in the modernization program was the heating system, which was renewed practically in its entirety. The new installation consists of a two-pipe low-pressure coal-fired steam heating system. The boiler, of the sectional type, is located in a specially prepared furnace room in the station's basement. The enclosed shelter on the westerly platform is heated by means of an auxiliary hot water heating system consisting of an Excelso heater connected to the steam boiler in the station basement. This system includes a 30-gal. hot water storage tank, circulating pump, temperature control apparatus and accessories.

Plans and specifications for the modernization of the station were prepared under the general direction of Raymond Swenk, chief engineer maintenance of way of the Central region of the Pennsylvania, and under the direct supervision of H. H. Seaton, engineer. The work on the ground was performed under the supervision of C. I. Leiper, chief engineer of the Central region, while L. P. Struble, assistant to the chief engineer, had direct supervision over the field work. N. F. Latta acted as engineer in charge on the ground. All work involved in the station modernization program was performed under contract by Peck & Udell, Cleveland, Ohio; while the passenger subway and the auxiliary waiting room on the westbound passenger platform were built by railroad company forces.

\* \* \*



Photo by Quartermaster, Fourth Corps Area.

An Army Photographer Risked His Neck Capturing This View of a Train Carrying the First Armored Division Careening Around a Curve in Northeastern Alabama During the Late October Movement to Maneuvers of the Division



# Railway Personnel Problems

How to select and train yard forces. How employees' suggestions save money

**A**T the recent convention of the American Association of Railroad Superintendents, a symposium on personnel problems was held, opening with a report on the selection and training of a competent yard force, by a committee of which R. O. Jensen, assistant superintendent, Minneapolis, St. Paul & Sault Ste. Marie, was chairman, and followed by addresses by O. W. Eschbach, dean, Northwestern Technological Institute, Northwestern University, Evanston, Ill., and by Harvey C. Marmaduke, manager, employees' suggestion system, Illinois Central.

## Yard Personnel

The training of a yard force necessarily involves far-reaching and complicated management problems. The management must be willing, if best results are to be obtained, to adopt and support a policy of training that will get results. It requires time to test it, time to perfect it, and time to make it effective. The ability to train and school men is an art in itself, and in the training and development of men, first consideration should be given to the basic rules governing their employment. They should know the reasons for the rules; they should be schooled in the details of their jobs and the reasons for the details.

It has been stated that a railroad expends an average of one thousand dollars to transform an inexperienced man into a reasonably efficient switchman by methods now common in America. Your committee believes this statement to be too conservative, but in accepting it, because of the impossibility of determining more exact costs, it points out that a railroad should not hesitate to spend a few dollars on the selection of an employee in whom it expects to invest a large sum.

### Primary Qualifications

In the selection of recruits, diligent efforts should be made to find individuals with the proper qualifications, rather than to wait for such individuals to find the railroad and apply for employment. High school superintendents should be interviewed and informed that graduates with a knowledge of typing, shorthand, computation and business methods are in demand and can be given preference in employment over individuals lacking such training. This knowledge enables school superintendents to recommend, with assurance, such courses for students who are unable, for various reasons, to continue their education beyond high school. This procedure not only enables the student to secure employment more readily, but also prepares for the railroad an individual who can be absorbed into its organization with a minimum of elementary railroad training.

During periods when new employees are not required, applications should be accepted and placed on file from individuals having the necessary qualifications. Of course, some of these applicants will find other employment in the interim between registry and call, but it prepares an employing officer to augment his forces quickly with recruits already interviewed and found acceptable.

Preparation is vital, because when more men are needed the employing officer is likely to be extremely busy with other matters.

### Age Limits

A considerable lack of uniformity prevails in the employment rules of American railroads with regard to age limits for new employees. These range, generally, from 18 years to 40 years for inexperienced and from 20 years to 45 years for experienced clerks; from 20 years to 35 years for inexperienced, and from 21 years to 45 years for experienced switchtenders and switchmen. Some railroads will not accept for employment in such positions anyone who has reached the age of 25 years. One railroad is offering employment as switchmen to youths of 18 years and is not requiring them to secure a minor's release.

It is definitely the conclusion of your committee that it is highly desirable to hire switchmen at the age of 18 years, provided they are reasonably well developed physically and can meet the other requirements. This may appear to be a radical departure from past practice as most of us know it, but times have changed, and the work has changed, as have also the qualifications for the employment.

### Primary Education and Training

Recruits should have sufficient formal education to perform properly and efficiently the duties of the highest positions to which they are likely to be assigned. Usually these are the position of chief clerks and yardmasters. While it is not necessary to have a college education with a major degree in the fine arts in order to fill a position as a yard clerk or a switchman, it is quite necessary that chief clerks and yard masters be high school graduates, or have an equivalent education. A generous appraisal should be made, when necessary, for extension courses and night school attendance, because an individual who is possessed of sufficient ambition to continue his education in this manner undoubtedly has more of the sterner stuff than a youngster who attended high school reluctantly at the insistence of his parents. Proficiency in typing should be required of applicants for yard clerk positions.

Many supervisors prefer to employ inexperienced applicants and train them for the work to be done. In the towns and smaller cities where employment opportunities are limited, this is unquestionably the best procedure. However, in the larger cities, where other industries frequently offer more appealing, if not better, opportunities, as well as better working conditions and better hours, it is difficult to induce desirable recruits to accept employment and train for railroad positions. In such cases it is advantageous to the railroad to employ experienced workers, provided each individual's record indicates that he is not of the "boomer" type, and did not leave his former position for reasons which would brand him as undesirable.

Your committee does not recommend the employment

of women in yard offices, but recognizes that national programs now in effect or contemplated, may reduce the supply of men workers to such an extent that it will become necessary to employ them. We still have some of the women hired during the first World War. Many are good employees, but too often they occupy key positions, and interfere with normal training plans by preventing men from benefiting from experience on such positions.

Each recruit should be obliged to pass a physical examination. Physical perfection should be sought. The requirements should be lowered only when this becomes necessary to secure an adequate personnel. Railroads, as well as other industries, cannot afford to train men who must later be dropped because of physical shortcomings.

### Mental and Moral Fitness

Recruits should be interviewed thoroughly and intelligently to insure that the best possible employees be obtained. It is suggested that a list of questions be prepared which will enable the employing officers to evaluate such characteristics in the applicant as alertness, dependability, ingenuity, initiative, personality, and resourcefulness. There should also be questions to determine his personal habits, attitude, environment, scholastic reputation, ability to get along with others, and capacity for advancement.

Dependability is of prime importance. It covers such virtues as truthfulness and honesty. It implies that when a task is assigned, it will be done efficiently and on schedule, regardless of the presence or absence of superiors. A constructive and co-operative attitude is highly desirable. Too frequently a smoothly-running organization is disrupted because of the attitude of some individual who is overly critical or unwilling to follow suggestions. Environment must not be considered too lightly, as the surroundings in which an individual lives will affect his efficiency more frequently than is usually realized.

The manner in which a recruit is received and inducted into service is of great importance. The officer should endeavor to dispel from the new employee's mind all thoughts which deal with a master-and-servant relationship or viewpoint. It should be impressed upon him that the company has high ideals and traditions which it strives to uphold, and that every employee will be treated as a man among men in a courteous and impartial manner.

### Primary Instructions

Because safety is of first importance in railroad work, it should be the first thing taught to a new employee. The formation of safe habits is a basic fundamental of safety. It might be well to remind him that all humans are creatures of habit; that he has, very likely, put on his right shoe first every morning for the last ten years; that he begins his shave each day in the same manner; and that habit dictates his method of performing almost every personal action from the time of his rising until he retires. In this manner the new employee can quickly be made to realize that by making a habit of performing each operation of his job safely, he can, almost without conscious effort, avoid injuries.

The new employee should be given a brief outline of the company's history, and told of its position in the general transportation scheme. It might not be amiss to point out to him that just as the employing company

is one of the important links in the nation's chain of transportation, so, also, he will be one of the important units in the yard in which he is employed, and that neither he nor the railroad can be expected to function perfectly all of the time, but that he will be expected always to do the best he can and contribute to the general esprit de corps, to the end that the railroad may give a good reliable service.

The patron policy of the railroad should be touched upon. It might be explained to him that while the railroad has operated 50 years, 75 years or 100 years without him, and could continue without him, even though he may become, and it is hoped that he will, an important part of the organization, it cannot operate without its patrons, and that if it should lose its patrons, there would be no need for the railroad and no need for his services. The fact that the patron comes first should be stressed.

The employee policy of the railroad should be mentioned. It should be explained to him that he will be treated fairly and impartially, and, in return, will be expected to so treat his fellow employees and the company. In so far as is possible, each employee should be permitted to establish the basis for his relationship with the company. If he elects to establish it on a basis of mutual consideration, the company should recognize that basis. If he should elect to establish it on an arbitrary basis, requiring the company to keep its toes constantly on the mark, he must expect, also, always to perform perfectly.

### Train Rules

The foregoing observations concerning training apply to yard employees generally. Outside employees need special instructions in connection with signals, rules, rough handling of cars, etc. Student switchmen should be required to make student trips with crews chosen for their ability and efficiency. Upon the conclusions of these trips, they should be instructed in, as well as questioned on, operating rules and safety practices. Certainly a beginner, after several student trips, is not well enough informed to pass an examination on train rules or even operating practice. If he knows only the signals and flagging rules, he has made average progress. However, at this time there exists an opportunity for the examiner to instruct him in some of the important applications of the rules.

He should be required to do a hypothetical job of flagging. The officer should explain to him why a flagman must go out even when the engineman does not sound the whistle for him to do so; why a flagman carries a white lantern; why a flagman always carries fusees; how to light and hold fusees so as to avoid injuries from them; what a fusee indicates in daylight; how to place torpedoes; where he should stand in relation to a placed torpedo; and what might happen when an engineman calls for signals at an interlocking plant. He should also be shown how to stand when giving signals, and what to do when he hears a short blast of an engine whistle. The officer might also draw his attention to the desirability of observing the one important rule, which no railroad rule book contains—the Golden Rule, and remind him that if he will observe this rule he will find his work more pleasant, and his progress more rapid.

### Selecting Supervisors

In the selection of supervisors, ability, ambition, character, energy and intelligence should be considered, and only those with an imaginative type of mind and the



ability to visualize the problems of the entire operation should be selected for the higher places. These qualities can be developed by a suggestive form of training, such as giving the individual the benefit of one's experience, by discreet leads as to how to plan and solve the problems of the day, and by constructive praise and criticism.

The training of a yardmaster should be arranged to develop the following qualifications:

1. A knowledge of the agreements with labor organizations, and the extent to which such agreements affect yard operation.
2. A thorough knowledge of train and safety rules which affect yard operation, and a determination to see that they are observed.
3. A knowledge of approved methods which reduce sawing of switches and coupling failures.
4. A thorough knowledge of the physical characteristics of the yard to which he is assigned. This should include the lengths and locations of all tracks, also peculiarities of grades and curves which affect switching.
5. A general understanding of system train schedules and important connections at gateways.
6. A full understanding of detailed train make-up for the division, and for yards beyond the division.
7. Familiarity with the various classes of equipment and the equipment needs of industries.
8. Ability to work successfully with others, and to handle men.
9. The foresight and ability to plan yard assignments properly, adjust power to increases and decreases in business, and to shift work from one engine to another or from one shift to another, as the exigencies of the service may necessitate.
10. The ability to analyze yard movements for the purpose of determining proper time allotments for each operation.
11. A determination for fair and just treatment of all employees.
12. An insistence on high standards of performance.
13. A proper regard for careful switching for the purpose of minimizing damage.
14. Full appreciation of the importance of prompt interchange of cars to reduce per diem and expedite shipments.
15. A willingness to invite and utilize new ideas and suggestions, from superiors and subordinates, which will increase the general efficiency.

Every yardmaster should be encouraged to familiarize himself with the operations in other yards and as they affect system freight movement. He will find innumerable opportunities for joint action and co-operation that will increase the general efficiency. This is not only true as between yards on the same railroad, but, also, as between yards on different railroads in the same terminal. All officers in any terminal should co-operate and seek opportunities for assisting one another, to the mutual benefit of all concerned.

The supervisor should be taught to appreciate not only his own value and the value of every other employee, but also that each person contributes to his group and each group to the general success of the operation. He should be taught to be exact in his demands, but courteous, impartial and tactful. He should be able to differentiate between supervision and interference, and between errors in commission and errors of omission. He should encourage his subordinates to prepare for promotion, and endeavor to broaden them by the occasional assignment of some of his duties to them. He should remind them of, and recommend for them, study courses offered by the railroad and by commercial concerns which offer various railroad courses, including foremanship, for those interested in preparing for positions of greater responsibility.

It is readily conceded by your committee that the railroads can not, because of schedule provisions and other reasons, accomplish everything desired in the selection and training of employees. However, all possible efforts should be made, and must be made, in order that the

railroads as an industry may avert decadence and keep pace with industrial progress. Assuredly, it is time to begin.

### Recommendations

Your committee recommends that the selection and training of yard employees be given attention in keeping with their importance; that in-so-far as is practicable, only high school graduates be accepted as employees; that high physical standards be maintained; that yard employees be accepted at the age of 18; that no women be employed in yard offices; that the duties of the more important yard positions be set forth in written instructions; and that superintendents manifest no hesitance in augmenting their staffs when necessary to insure the proper selection and training of employees, because this is one of their most important duties.

### Enlisting Employee Interest

H. C. Marmaduke, manager, employees' suggestion system, Illinois Central, described how, with 30,000 employees, the I. C. felt that these 30,000 brains, 60,000 eyes and 60,000 ears might be utilized in observing and suggesting things of value to the I. C. This required a special technique, as was indicated when a prior award system, in effect from June, 1937, to March, 1939, brought in only 1,135 suggestions, of which 29 were adopted and only \$475 paid out to employees for their ideas.

Describing the present system, Mr. Marmaduke said: "With the assistance of a firm of industrial engineers in Chicago, a new suggestion system, especially adapted to our requirements, was installed on March 6, 1939. Important to its success was the establishment of a small staff under the jurisdiction of the assistant to the president to devote its entire time to handling suggestions. In the past the suggestions had been handled on the corner of the desk by busy employees and thus received scant attention or consideration. The suggestion system being handled by the president's staff assured employees that it was the desire of the management and the suggestion committees to be fair and impartial. It was the plan to receive each suggestion, as the brain-child of the employee, with an open mind; to try and adopt it in whole or in part; or to take action exactly opposite to that suggested if it would remedy the condition referred to. If any action whatever was taken, the employee was to receive a portion of the savings or profits.

"During the 27 months of operation under the new plan, we have received more than 38,000 suggestions, of which 3,811, or 10 per cent, have been adopted. Our employees have received for their interest and constructive thinking more than \$37,000, in amounts ranging from a minimum of \$5 to a maximum of \$1,863 (the maximum award represented a saving to the railroad of approximately \$18,000 per annum). These are impressive figures, but when we compare the receipt of 38,000 suggestions to 1,135 under the old plan; 3,811 awards to 29; and the payment of more than \$37,000 to employees to only \$475, our progress is even more impressive.

"In the first 12 months we received an average of 306 suggestions per week from our employees. During the second 12 months the suggestions averaged 346 a week, and for 12 weeks in the third year they have averaged 400 per week. Constructive thinking on the part of our employees has been accelerated. The suggestions we are receiving today indicate the application of greater

thought, with the result that we are getting more valuable suggestions than during the first two years of operation of the system. For example, during the past four weeks alone, there were individual awards of \$680, \$610, \$260, and \$250, as well as many others of substantial amounts.

"The suggestion system is based primarily on the suggestion blank. It is addressed to the suggestion committee; the employee writes the date, and then writes out the suggestion as clearly as possible. At the bottom of the blank is the notation 'Do not sign your name.' There are several other questions, among them, 'Is this your original idea?', 'I think this suggestion should be adopted because . . .' (and this is to enlarge upon the suggestion). Instructions for submitting the suggestion are printed on the back of the form so the employee may be guided in the proper submission of his idea. The stub of the form is then torn off and retained by the employee. The status and progress of the suggestion after its submission are reported on weekly bulletins, and the name of the employee is not disclosed until his number appears as a winner, at which time we obtain his name, title, occupation, and address, so that a voucher may be prepared and forwarded to the employee, together with a letter of appreciation signed by the president.

"The \$5 minimum award covers ideas of a minor nature for which the benefits cannot be measured in dollars and cents. Some \$10, \$15, and \$20 awards are paid for ideas which have greater benefits, even though intangible. There is no maximum award. Where a suggestion results in savings or profits that can be measured, based on labor, materials, supplies, etc., awards approximating 10 per cent of the net savings for the first year are voted by the general committee. One of our mechanical department employees has won 56 times since the beginning of the plan. His nearest competitor has won 45 awards. Others, both male and female, are frequent repeaters, thus exhibiting a marked interest and intelligent understanding of our operations.

### Summary

While the tangible savings, such as the reduction of waste, and claims, and the improvement in operation, have more than justified the installation of the suggestion system, we have found the intangible benefits to be of more value than the money saved. Here are the principal reasons for this conclusion:

Both the officers and the employees have intensified their constructive thinking.

The suggestion system has provided an opportunity to contact employees by bulletin and to discuss details leading to the development and adoption of their ideas. In addition, there is the further valuable opportunity to explain in some instances why suggestions cannot be adopted.

Increased interest and enthusiasm are shown by the employees in their work because they now know and realize that they have a voice in the conduct and operation of the Illinois Central system. An added incentive for constructive thinking is the opportunity for earning extra compensation.

We now have an avenue through which we can prove conclusively the management's desire for fairness, because we handle the suggested ideas by numbers rather than by names and personalities.

More than two years of experience with our suggestion system has developed heretofore unused thinking power, a new strength which has been, is, and will be, an important contribution to national defense.

### Selecting Men

Dean Eschbach described in detail the manner in which the telephone industry met a pressing personnel problem. The industry faced the question of doubling its plant and doubling its personnel in a few years, and the plant was scattered over the country much like that of the railways, while a high percentage of the personnel consisted of skilled technical labor.

"The plan adopted by the telephone industry to secure technical assistance was for groups of not more than three or four people from the different companies to visit colleges, with authority to hire young men on the spot. These selectors represented different interests, in some cases research, in some cases manufacture, and in some operating. They interviewed the men and discussed them after they had interviewed them on a predetermined schedule. Sometimes 120 to 180 men were interviewed in one week and in the evenings these records were gone over, and the men analyzed and rated. They were rated only because it was a crude and simple way of recording their general opinions, both for their own information, and for the transmission of the information to other people who had not seen the men.

"The men selected were offered jobs there at school, they had the job, the salary, the conditions of employment, and everything, but were not asked to accept the job, but were told to see all other opportunities and if they were still interested and wanted to come with the organization to write and accept the job when they had made up their minds. If time lagged, the office would get in touch with them to find out whether or not they could come to a decision. On this basis, in the operating organization, something like a thousand men a year were brought into the company. At the same time over 3,000 undergraduates were employed for supervisory work in the organization, an average of about 550 a year.

"When they were reported for work the practice differed in their training, but one principle prevailed. The matter of how it was done was secondary. That principle was to bring the new men together so that they would know each other, and the people in the organization would know them, and to assign them to jobs over a period of a couple of months that would give them quickly a picture of what the business was about, and at the end of that time to assign them to a department or class of work which was their beginning job.

"You can catalog all of the abstract qualities of honesty, personality, and try to rate people on them, and after you are through you have just made yourself a lot of work. There is one good test, that is the measure of the man's performance on his last job. It is very important in the hiring of boys who have been out of high school and shifted around a little bit. In the employing of college graduates, that does not appear. I do not believe that I asked for a letter of recommendation in more cases than one in 20 of all of the college men I hired, and I interviewed some ten thousand. You do not need them. The record of the last employment is the four years in college, and the things to judge are the things that consumed his time. What do the boys say about his record? What was the quality of the work that he did? What did he do altruistically or selfishly? What did he do around the campus? Did he participate in athletics? If he did, was he good? Did he edit the newspaper? Was he on the staff? Didn't he do anything?

"If he was the treasurer of his fraternity, you can bet that a group of boys never elected him to handle the money unless they thought he was honest. And, last, did he work his way through school?"



# Back to the Emergency Board

President Roosevelt reconvenes group which reported on wage dispute for further consideration of case

WASHINGTON, D. C.

**R**ECONVENING of the Emergency Board for brief sessions in which railway labor and management will be heard on what is expected to amount to labor petitions for reconsideration by the Board of its recently-promulgated recommendations is President Roosevelt's latest move in his effort to bring about a settlement of the wage controversy. The controversy, which has brought a December 7 strike threat from the five operating brotherhoods, arose out of labor's action rejecting the Board's recommendations that have been accepted by the railroads.

President Roosevelt announced the foregoing plan at his November 25 press conference which followed a couple of hours after the last of a series of meetings he had been holding with representatives of railway management, labor and the government. The President said that he was asking the Emergency Board to reconvene, and he also made public copies of a letter he had sent to J. J. Pelley, president of the Association of American Railroads, George M. Harrison, president of the Brotherhood of Railway Clerks, Alvanley Johnston, grand chief engineer, Brotherhood of Locomotive Engineers. The letter said: "As a result of many days of conference, in relation to the railroad problem, I am, on my own motion, reconvening the Emergency Board. I am hereby requesting the parties to appear before this Board. I am asking the Board to commence its hearings on Friday, November 28, and I hope that you will be ready to appear before it at that time. I suggest that each party be allowed one day to state their case, as this will greatly expedite the proceedings, and because of the fact that the Board itself has previously received information from each side. I am asking that the report of the Board be handed down on Monday, December 1st."

## Special Facts Have Materialized, President Said

The President was asked at the press conference if there had arisen special facts which might warrant an upward revision of the wage adjustments recommended by the Board. Mr. Roosevelt replied that he would not put it that way, adding that he was reconvening the Board because of special facts which in his judgment have materialized since the previous report. As noted in the *Railway Age* of November 8, page 746, the Board's original report was made public November 5; it recommended temporary increases in wages of 7½ per cent for the operating employees and 13½ per cent for the non-operating group which latter would also get vacations with pay. The operating brotherhoods have set their strike for 6 a. m. December 7, 8 and 9, while the non-operating unions have condemned the report without stating that they would strike.

The new Emergency Board hearings are to be held in Washington. Members of the Board are: Wayne Lyman Morse, dean of the law school, University of Oregon, chairman; Thomas Reed Powell, professor of law, Harvard Law School; James Cummings Bonbright, professor of finance, Columbia University; Joseph Henry Willits, director for social science, Rockefeller Foundation; and Huston Thompson, Washington, D. C., attorney. One

explanation for the procedure of reconvening the Board was that its role would be akin to that of a court which has been asked to reconsider a decision. Meanwhile, it is understood that throughout the negotiations which have taken place since President Roosevelt's intervention, the management representatives have remained steadfast in their stand on the Board's report, refusing to offer any increases over and above those there recommended.

Likewise, it is understood that because of this stand on the part of management, the labor representatives did not come forward with a definite proposal as a basis for a settlement which would be satisfactory to them.

## New Demands from B. of R. T.

While the Washington negotiations were going on this week, A. F. Whitney, president of the Brotherhood of Railroad Trainmen, served notice on all the railroads of a desire for changes in working rules which would give trainmen two-weeks annual vacation with pay; 12 cents an hour to cover expenses incurred while away from home terminals; payment of wages to start 16 hours after a trainman is held at an away-from-home terminal; time and one-half for overtime in passenger-train service; and limitation of freight trains to 70 cars and passenger trains to 14 cars. Commenting on this latest Whitney demand, the Eastern Presidents' Conference estimated that to meet it along with other pending rules-change demands of the unions would cost the railroads \$348,000,000 a year over and above the \$270,000,000 which they have agreed to take on in accepting the Emergency-Board recommendations. At the White House on Tuesday, Mr. Whitney told reporters that his latest demand which was served on November 24 would, in his opinion, cost the carriers about \$50,000,000 a year. The train-limit proposal, he conceded, "would run into money," but he went on to assert that the pending rules-change demands of the carriers would cost labor \$500,000,000 a year.

## Whitney Threatens Government Operation

Mr. Whitney got in on the White House conferences after he had protested in a wire to President Roosevelt that Messrs. Harrison and Johnston who were called in for the initial sessions on November 18 and 19 had no authority to speak for the trainmen. Accompanied on his trip to Washington by a press representative, the B. of R. T. president issued statements recalling his testimony at the Emergency Board hearings to the effect that he was about ready to go to the President and suggest that the government take over the railroads for the duration of the emergency.

As noted in last week's issue, the initial White House conferences on November 18 and 19 were attended by Messrs. Harrison and Johnston as representatives of labor, while President Pelley of the A. A. R. and R. V. Fletcher, A. A. R. vice-president and general counsel, represented management. Government representatives were Solicitor General Charles Fahy, Chairman Joseph B. Eastman of the Interstate Commerce Commission,

Chairman David J. Lewis of the National Mediation Board and Senator James M. Mead, Democrat of New York. Out of them came November 21 meetings between labor and management, management being represented by the Carriers' Joint Conference Committee which had been handling the wage matter right along and labor by the heads of the five operating brotherhoods and an executive committee of four representing the 14 non-operating unions. Prior to this Mr. Whitney, as noted above, had been brought into the picture when he conferred earlier in the day with President Roosevelt at a meeting attended also by Grand Chief Johnston of the B. of L. E. and Senator Mead. Mr. Whitney then said that he thought the President's approach was "very fine," and that he knew railroad labor "wouldn't want to embarrass the President or the President's national defense program."

### Two Tries at Settlement

The first attempt to resume direct negotiations on the afternoon of November 21 broke up after the labor and management representatives had been together for about an hour. They came together later the same evening only to break up after an even shorter session. Thus the whole group—management, labor and government representatives—were back on November 22 at the White House where they were persuaded by the President to make another try at direct negotiations. The new try, as Mr. Harrison put it, would be made in the light of the new discussions with the President and in the light of the situation in the nation. Also, the B. of R. C. president revealed that the railroads had refused to make any concessions over and above the Emergency Board recommendations.

The joint labor-management meetings were not resumed until Monday, November 24, after the Carriers' Joint Conference Committee, which is headed by F. G. Gurley, vice-president of the Atchison, Topeka & Santa Fe, had been in more or less continuous session over the week-end. The outcome was a morning meeting on Monday between representatives of the five operating brotherhoods and the chairmen of the three regional components of the Carriers' Joint Conference Committee. Labor representatives present were Messrs. Johnston and Whitney, H. W. Fraser, president of the Order of Railway Conductors, C. J. Goff, assistant president of the Brotherhood of Locomotive Firemen & Enginemen, and T. C. Cashen, president of the Switchmen's Union of North America. Management representatives were Mr. Gurley, J. W. Smith, vice-president and general manager of the Boston & Maine, and J. B. Parrish, assistant vice-president of the Chesapeake & Ohio. The same railroad representatives met on Monday afternoon with two representatives of the 14 non-operating unions President Harrison of the B. of R. C. and B. M. Jewell, president of the Railway Employees Department, American Federation of Labor. This concluded the negotiations between the parties, and arrangements were made for the November 25 report to the President.

### Delays F. D. R.'s Thanksgiving Holiday

On the morning of that day the White House conference group of nine got together again with Mr. Roosevelt who requested the labor and management representatives to consider his suggestion that the Emergency Board be reconvened and report back to him in the afternoon. The report was favorable and President Roosevelt followed through with his press conference announcement, saying also that he would be able to get

away on Friday for a delayed "Thanksgiving" dinner at Warm Springs, Ga. The wage controversy was one of the things which had been keeping Mr. Roosevelt's plans for this trip in an uncertain state.

### New and Pending Demands of the Unions

The Eastern Presidents' Conference canvassed the situation in a statement issued to the press after its November 25 New York meeting, reading, in part, as follows:

"At its last meeting on November 17 the Eastern Railroad Presidents' Conference ratified the action of its committee in accepting the findings of President Roosevelt's emergency board, notwithstanding an estimated cost of \$270,000,000 per year to the railroads involved, and granting an increase of 7½ per cent in wages to the train and engine service employees and 9 cents per hour and vacations with pay to the others.

"Other unsettled and pending demands of the unions, including those of the Brotherhood of Locomotive Firemen & Enginemen for reclassification of pay, rules and working conditions and a demand of the Brotherhood of Locomotive Engineers that the roads employ additional men on Diesel locomotives. The American Train Dispatchers' Association has also made separate demands upon roads which are still unsettled, and these demands include a request for a substantial increase in wages, a 36-hour week, punitive overtime and other concessions.

"The public probably does not realize that the dispute covered by the report of the President's emergency board, which the brotherhoods have declined to accept and against which a nation-wide strike of engine and train service employees has been ordered, is only a part of the demands they have made upon the railroads. The new demands of the trainmen and the pending demands of the operating brotherhoods, above referred to, would in themselves cost more than the cost of the finding of the President's emergency board, estimated at \$270,000,000 per annum.

### Unions Plan to Give Public No Peace

"It is evident from these additional demands that the unions plan to give the railroads and the public no peace."

The public interest in the present belligerence of the railway unions was further emphasized by the Conference statement by a citation of a recent observation by Dean Morse, chairman of the emergency board. Said the Dean: "It should be stressed that the President's emergency board took into account the interest of the public as well as the selfish interest of the employees and the carriers. Hence it is to be hoped that public groups will interest themselves in the facts and conclusions set forth in the board's report."

Meantime, officers of the Brotherhood of Railroad Shop Crafts of America, representing shop employees of the Pennsylvania, have signed an agreement with the management of that road, in which both of the signatories accepted the recommendations of the emergency board as to wage increases and vacations to be accorded to employees in the non-operating category.

That is, a basic minimum rate of 45 cents per hour is established. Maintenance of equipment department employees covered by the agreement are to have their wages increased by 9 cents an hour, from September 1, 1941, to December 31, 1942. Piece-workers will be accorded a proportionate increase. The employees included in the agreement will also receive an annual vacation of six working days, with regular pay for time thus absent.



# Communications and Books . . .

## Education of Employees

NEW YORK

TO THE EDITOR:

Your article in issue of November 8 entitled "Colloquy on Employee Information" is indeed illuminating. I have suggested on several occasions that if your own editorials, perhaps in digest, were placed before employees frequently it would overcome to a considerable extent the misinformation and the lack of information which leads to such erroneous ideas by the average railroad employee. I think you are too modest as to the effectiveness of the arguments in your editorials and if excerpts of these were given to employees (with their paychecks, for instance) there would be at least a few who would peruse, and benefit by them. Many would merely cast them aside and term them "company propaganda" but if only a few absorbed their contents it would be of some value to the industry.

On two or three occasions I have foolishly allowed myself to be drawn into arguments with union-minded employees. One once informed me that "railroad bonds are paying seven per cent to Wall Street" and I presume that both the mis-statement itself and the implied form in which bond interest is paid is a current error of many other employees.

Your editorial on the success of the telephone company's methods in creating good-will is also illuminating, although having a monopoly gives them a certain advantage which the railroads do not possess. But I think, as you do, that if employees had honest facts given them by their companies periodically (as some roads now do) it would eventually counteract some of the distortions to which you allude in union publications. We must recognize the fact, however, that we are now living in an era when virtually all elective officers—federal, state and municipal—are thoroughly pro-labor and anti-capital. The pendulum may swing again; meanwhile, your voice, and those of a few other fearless publications, are like voices crying in the wilderness, for a return to sound, economic principles of government.

FRANKLIN SNOW.

## Too Easy for Trucks to Operate Only When It Pays

UNIVERSITY, LA.

TO THE EDITOR:

I have given a considerable amount of time and thought to the problem of subsidy in the transportation field. A point that I wish to call to your attention is one that to date I have seen no analysis of whatever.

You are no doubt aware that the coordinator of transportation sets 40 per cent as the arbitrary ratio of payment as between the highway carriers themselves and the so-called social users. This question has been approached on the basis of whether or not this percentage, arbitrary as it must be, is the correct one. It seems to me that though the total amount be the same, an important distinction might be drawn as between different methods of payment.

In the railroad field, the creation of a permanent way and the provision for its maintenance results in a fixed cost to the railroad over the life of the road. Even if motor carriers pay the proper amount, their payment comes through the state, in taxation, and results in a very low fixed cost as far as the price of their service is concerned.

At first glance it would seem that this distinction would leave an advantage for the railroads, since the railroad price may be set on the basis of variable costs which are comparatively low. On the other hand, strenuous as is commission control over minimum rates, that particular advantage is lost to the railroads. A gain to motor carriers results in the fact that the higher the percentage of their costs that are variable, the easier it is for them to enter and leave the field. This means that over a long period of years motor carriers, with only the check of "convenience and necessity," might enter the transportation field

at the time the railroads should be recouping their inevitable low period of earnings by prosperity returns. Conversely, the motor carriers have in depression years a very excellent argument for withdrawing from the field, by the mere showing of inevitable losses which a regulatory commission frequently interprets as being a public admission that the services are no longer necessary.

All this is not to say that a thoroughly competent and daring commission might not be able to adjust these necessary injustices in rate making, but there is considerable doubt that the present commission is sufficiently familiar with the problems of motor carrier regulation, differing as they do in at least this one significant respect, to produce justice in the near future. To date, motor carriers, as an integral element in our transportation world, have not yet seen a complete business cycle with all that such a cycle holds in store for them. Over a period of two or more cycles these problems can more readily be noticed. Probably legislatures are even less familiar with the basic principles involved. I do think that the economic import of motor carrier transportation with permanent way as a variable cost, in competition with transportation facilities that have a permanent way which must be considered a fixed cost, is a problem in transportation that has received too little attention as yet.

HOWARD R. SMITH,  
Instructor in Economics,  
Louisiana State University.

## New Book

*Universal Directory of Railway Officials and Railway Year book, 1941-1942, compiled from official sources under the direction of the editor of the "Railway Gazette." 572 pages. 8½ in. by 5½ in. Bound in cloth. Published by the Directory Publishing Company Limited, 33 Tothill Street, Westminster, S. W. 1, London, England. Price 20 shillings (approx. \$4).*

War or no war, the British have again produced the annual Universal Directory of Railway Officials and Railway Year Book. The publishers note in their letter of transmittal: "Although hostilities in many parts of the world have again made it impossible this year for information to be obtained direct from some places, the Directory has been successful in securing up-to-date details of many of the world's railways to an extent that was not thought practicable in the early stages of preparation."

The book carries the usual three indexes—general index; index to countries and a personnel index of railroad officers—and brings world-wide statistical data as up-to-date as possible.

\* \* \*



Photo by Quartermaster, Fourth Corps Area

**A Railroad Conductor and an Army Train Commander Check Running Time While Standing in the Shadow of an Armored Half-Track Truck During Movement of the First Armored Division by Rail to Maneuvers Handled by 15 Southern Railroads**

# NEWS

## Prices Fixed on Lumber for Cars

Southern pine for freight cars has "ceiling" put on it by Henderson's henchmen

Amendment of the Southern pine lumber price schedule to bring freight car construction materials under a ceiling and to make other important adjustments was announced on November 19 by Leon Henderson, administrator, Office of Price Administration.

Maximum prices established for freight car decking, sheathing, and lining are from \$2 to \$8 per thousand board feet below existing levels. Other changes made by the amendment, which becomes effective November 24, 1941, include:

1. Top prices for flooring are raised for the two highest grades and reduced for the two lowest grades.

2. Allowance for mixed shipments is reduced from \$2 to \$1 per thousand board feet.

3. An addition of \$3.50 per thousand board feet is allowed in the case of retail direct-mill shipments, accompanied by specified retail services.

4. Ceiling prices of bevel siding are reduced, and those for the two highest grades of drop siding are adjusted to decrease the maximum for certain patterns and to increase the prices of other patterns.

5. Permissible additions to maximum prices for planing of boards are lowered and those for drying are increased.

When the Southern pine lumber schedule originally was issued, explained Mr. Henderson, it was not considered necessary to include freight car materials since it was expected that the OPA ceilings for other items would serve to keep car material prices stable. This expectation was not realized, he continued. Moreover, manufacturers of the higher grades of flooring, which are under the OPA ceiling, diverted some of their flooring production to freight car materials. Supplies of high-grade flooring, already short, thus were reduced further.

The OPA amendment is designed to correct this situation in two ways, Mr. Henderson pointed out. First, by setting maximum prices for the principal types of freight car materials at less than current levels and, second, by increasing the ceilings for the two upper grades of flooring by \$3 per thousand board feet. Simultaneously, the top prices for the two lowest grades of flooring, supplies of which are adequate, are reduced by \$1 per thousand board feet.

## Air Lines Show Large Increase in Passengers

Figures showing an increase of more than 38 per cent in the number of revenue passengers using the domestic air lines the first nine months of this year over the first nine months of last year have been released by Donald H. Connolly, the administrator of civil aeronautics.

In the first three quarters of 1941 General Connolly said that 2,792,002 persons flew in scheduled transport planes as against 2,013,208 in that period in 1940. Similar increases, it was said, were reflected in the number of miles flown and the pounds of express carried. The number of revenue miles flown increased from 79,449,824 in the first three quarters of 1940, to 98,442,706 for the same period of 1941; while the pounds of express carried was up from 8,647,457 for the first three quarters of 1940 to 13,374,022 for the corresponding period this year.

A special allowance is made in the amendment for final inspection of car materials at the destination point, rather than at the mill. Destination inspections usually result in more rejections for defects, and leave the rejected lumber at a distance from the mill; hence, they involve higher costs for the seller, it was explained. The amendment allows an additional charge of \$5 per thousand board feet to cover these greater costs.

## Status of R. F. C. Rail Loans

The monthly financial statement of the Reconstruction Finance Corporation as of October 31, shows loans to railroads, including receivers, of \$811,325,175 and repayments of \$363,431,186.

## Texas "Zephyr" Derailed

One of the Texas "Zephyrs" of the Colorado & Southern-Ft. Worth & Denver City was derailed on the outskirts of Dallas, Tex., on November 20, when a truck carrying steel girders ran in front of the train. The engineer of the train and the truck driver were killed and six passengers were injured. The train, consisting of a steam locomotive and seven cars, was en route to Dallas when the accident occurred at 7:45 a. m. The locomotive and two cars were thrown across the track but remained upright.

## Mansfield Reports Record Pork Bill

Almost every big or small ditch ever suggested for canalization is in this bill

Representative Mansfield, Democrat of Texas and chairman of the House rivers and harbors committee, has reported to the House for its favorable consideration an omnibus rivers and harbors bill authorizing the construction of 236 projects with a total estimated cost of \$987,645,731. Mr. Mansfield has indicated that he will not call up the bill until the next session of Congress in January. Included in the list of projects are such highly controversial ones as the St. Lawrence seaway and power project, the Tennessee-Tombigbee waterway, the canalization of the Beaver and Mahoning Rivers in Ohio and Pennsylvania, and the Florida Ship Canal, which, according to the report, would first be constructed as a barge canal and then deepened for ship use.

Three Democrats and five Republicans signed the minority report. They were Representatives Schulte of Indiana, Beiter of New York, and Bell of Missouri, Democrats; and Carter of California, Dondero of Michigan, Rodgers of Pennsylvania, Hall of New York, and Osmer of New Jersey, Republicans. In addition, there were included in the report two minority statements on the St. Lawrence project and on the Beaver-Mahoning canal. The minority report disapproved of the entire bill, while the two special reports condemned the St. Lawrence project and the Beaver-Mahoning canal as not in the public interest at this time.

The initial part of the majority report is careful to point out that only 36 out of the 236 projects approved have been certified as necessary to national defense, and this only after "careful consideration by the Budget and with the recommendation of the War Department, the Navy Department, or some other defense agency."

"It is not intended or expected," the report continues, "that any of the other projects which this bill would authorize will be appropriated for or constructed until the present national emergency is past unless during that period some of them should develop as necessary in the national defense . . . The committee wishes to emphasize the obvious fact that this bill is purely an authorization measure and that with the exception of the projects certified as essential to the national defense no ap-

(Continued on page 931)



## Equipment People Are Admonished

Leon Henderson warns them not to boost their prices without getting his permission

Manufacturers of railroad freight and passenger cars, locomotives, and maintenance of way and signal equipment have been asked not to increase prices above the levels in effect on October 1, 1941, Leon Henderson, Administrator, Office of Price Administrator, announced on November 21.

The request, in the form of a letter, stated that OPA is studying the entire railroad equipment field and that formation of panels of industry members is under consideration. To get first-hand information on price problems, policies and procedure, meetings of OPA with railroad car and specialty manufacturers and producers of maintenance of way and signal equipment were held in Washington on November 18 and 19, respectively. Locomotive builders and specialty manufacturers attended a similar meeting November 25.

The OPA studies will cover freight and passenger cars of all types; car specialties, such as brake equipment, draft gears, roofs, doors, seats, lighting and heating equipment and other passenger car fittings and fixtures; steam, electric, Diesel and gasoline-powered locomotives; locomotive specialties, such as feed water heaters, injectors, sanders and superheaters; and maintenance of way and signal equipment and apparatus, the announcement stated.

Mr. Henderson's letter also requested manufacturers not to change their practices with regard to extra charges, discounts, allowances, or concessions and to continue to use the same methods of pricing specially designed equipment "so that the price set on special equipment will be the same as would have been set had the estimate been made on October 1, 1941."

"In making these requests," the Administrator's letter added, "I recognize that you may have had certain cost increases in respect to labor and materials. This is offset by the fact that most companies are presently operating close to capacity and that overhead per unit of production has shown a tendency to fall. It is likewise a matter of importance that a ceiling has been placed on the price of steel, the major component of railroad equipment. In addition, ceilings on castings and forgings are presently under discussion.

"In the event that you have effected any price increases after October 1, 1941, please inform me as to their nature and extent, together with your reasons in support of such changes. Please do not make any price increases after the date of this letter without submitting to us for review your data justifying such increases well in advance of the date when such increase is contemplated.

Meanwhile, as noted above, locomotive builders and specialty manufacturers met in Washington with OPA officials on November 25. This meeting was exploratory in nature and followed the same general lines as that with the railroad car and

specialty manufacturers and producers of maintenance of way and signal equipment which was held on November 18 and 19.

As noted in Mr. Henderson's letter, the locomotive builders and specialty manufacturers were also asked to not increase their prices above the levels in effect on October 1. The OPA officials explained their general philosophy regarding price control and called for discussion from the various members of the industry.

### D. & R. G. W. Inaugurates Streamlined "Prospector"

Two streamlined passenger trains, the "Prospectors", were placed in overnight service between Denver, Colo., and Salt Lake City, Utah, by the Denver & Rio Grande Western on November 17. The trains leave each terminal at 7 p. m. and arrive at their opposite terminals at 8 a. m. covering the 745 miles in 13 hr.

### Army Staggers Furloughs to Relieve Holiday Travel Crowding

To insure smooth rail passenger operations during the holiday rush and to avoid overloading the railroads, the army has staggered furloughs during December and January. The first men will leave camp on December 13 instead of on December 20 as in the past and others will leave on succeeding days prior to Christmas. Return movements will also be staggered so that the last of the furloughs will expire January 12 instead of January 4 as in the past.

### L. & N. Opens Washington Office

The Louisville & Nashville has opened a Washington, D. C., office in Rooms 538-541 Woodward Building, 15th and H streets. J. H. Gooch, general agent, will be in charge.

### Pacific Coast Time Shifted Back to Seventh Morning

Transcontinental railroads operating from Chicago to the Pacific Coast have lengthened delivery time from sixth to seventh morning, effective November 20, to aid in the handling of the large volume of defense traffic. The change enables the railroads to handle a greater volume of business with fewer trains, allows more flexible operation and delivery at terminals and intermediate points and saves switch engine hours. In addition it permits a better distribution of departures and arrivals.

### Allocations for 112 Commercial Airlanes in 1942

Following the recommendations of the Civil Aircraft Committee, the Aircraft Branch of the Office of Production Management, has made tentative allocations of 112 planes to commercial airlines in the United States during 1942. This action follows the approval by the Supply Priorities and Allocations Board on October 7 of the plan for aircraft manufacturers to accept civil orders. For the 18-month period beginning January 1, 1942, the program provides for the construction and delivery of 228 planes.

## Luxury Roads in New Highway Act

President reveals that some funds in new law are going for non-defense projects

Reluctantly, President Roosevelt, on November 21, signed S. 1840, the rewritten Defense Highway Act of 1941, but voiced specific objections to the authorization of funds for the improvement to the strategic network of highways, off-street parking, reimbursement to the states for damage done roads by armed forces, and planning and surveys, all of which he termed "non-defense." The President had previously vetoed a similar measure because it had included what he thought to be non-defense authorizations.

The President's views on the legislation were voiced in identical letters to Senator McKellar, Democrat of Tennessee and chairman of the Senate committee on post offices and post roads, and Representative Cartwright, Democrat of Oklahoma, chairman of the House committee on roads.

"The authorization of \$50,000,000 for the so-called strategic network of highways and bridges," wrote the President, "does not represent, as compared with the authorization for access roads, an immediate defense need. Moreover, one-half of the amount authorized would be apportioned among all the states in accordance with the distribution formula of the Federal Highway Act, a formula that disregards what should be the sole objective of this legislation, that of providing highway construction in those areas, and in those areas only, where there is immediate need of such construction in the interest of our national defense. Not only does this authorization provide for the expenditure of \$25,000,000 regardless of immediate defense needs, but it requires the federal government to contribute 75 per cent and the states 25 per cent of the cost of such highways and bridges as against the existing highway act provisions for an equal sharing of the cost of such construction. The authorization also permits the expenditure on such highways and bridges—with the federal government paying 75 per cent of the cost—of any funds heretofore or hereafter made available for the federal highway system, including, in part, secondary or feeder roads, the amount of such funds at the present time being, I am advised, approximately \$267,000,000.

"The remaining authorizations for off-street parking facilities, reimbursement to the states for repairs to roads under certain operating conditions, and surveys and plans, fail to find, I think, satisfactory justification for enactment upon any ground that they are immediately required in the interest of national defense.

"In spite, however, of the objectionable authorizations which this bill contains, I have felt constrained to give it my approval because of the authorizations which it provides for the construction of access roads to military and naval reservations and defense industry sites and of flight strips

for the landing and take-off of aircraft. These two authorizations represent immediate and genuine national defense needs, and I do not think that I would be justified in taking any action that would further delay the accomplishment of these objectives.

"I wish, nevertheless," the President concluded, "to express my earnest hope that the Congress may find early occasion, in studying our national defense needs and the ways and means of meeting them, to eliminate from this enactment the authorizations to which I have directed attention as not representing immediate requirements for our national defense."

Specifically, the act provides authorization for:

1. \$150,000,000 in federal funds for access roads to military and naval reservations and defense plants;
2. \$25,000,000 for improvement to the strategic network to be matched 25 per cent by the states and 75 per cent by the federal government;
3. \$25,000,000 in federal funds for improvement to the strategic network, to be spent under direction of the Federal Works Agency;
4. \$10,000,000 for airplane landing and take-off strips alongside highways; and
5. \$10,000,000 for surveys and planning.

The act also provides that the federal government's share of costs of federal aid highway projects during the emergency shall be increased from 50 to 75 per cent, with the states furnishing 25 per cent of the money. This includes funds already authorized but not spent, estimated at approximately \$267,000,000.

The Commissioner of Public Roads is authorized to cooperate with the states in the location, development and construction of off-street parking facilities to expedite the flow of traffic on sections of the strategic network.

The new law also stipulates that the cost of acquisition of right-of-way for improvement to the strategic network and grade crossing elimination "to the extent determined by the Federal Works Administrator" may be included as part of the cost of such project. Where states are unable to obtain possession of required rights-of-way, the Federal Works Administrator is authorized to acquire such right-of-way by purchase, condemnation or otherwise and to convey title to these rights-of-way to the states.

At the same time President Roosevelt has appointed Brig. Gen. Philip B. Fleming, Wage and Hour Administrator, as Federal Works Administrator, succeeding John M. Carmody, who recently resigned that post and since has been appointed a member of the United States Maritime Commission. The Public Roads Administration is a part of the Federal Works Agency.

### **Doubt Confession by Laborer that He Wrecked City of San Francisco**

A 24-yr. old railroad section hand who was arrested at Susanville, Cal., on November 20 on charges of being drunk and disorderly, asserted, while being questioned in routine fashion, that he wrecked the

Streamliner City of San Francisco near Harney, Nev., on August 12, 1939, as reported in the *Railway Age* of August 19, 1939, page 289, for the purpose of robbing the injured, but his confession is being doubted by the sheriff. Because some details of the youth's story were confusing, he was taken to the scene of the wreck on November 22 to re-enact the crime.

### **Asbestos Firm's Paper Pays Tribute to Railroad Employees**

The million "beyond the scenes" workers "whose constant vigilance and teamwork get the trains there safely and on time" are honored by a two-page spread of fine photographs of railroad operations in the current issue of the "Power Specialist," house organ of Johns-Manville. One, which is a long time exposure of a passenger train at a division point, depicts the progress of the lantern of the "car knocker" by a wriggly line of white through the darkness. The same issue contains an illustrated article on the Ashley planes of the Central of New Jersey near Wilkes-Barre, Pa.

### **S. P. Freight Locomotive Catches on Fire in Hasson Tunnel**

The engineman, the fireman, the brakeman and two trespassers were asphyxiated and 300 steers were suffocated by exhaust fumes when a 96-car freight train stalled in the 7,000-ft. Hasson tunnel on the Coast line of the Southern Pacific near Hasson, Cal. on November 19. It is reported that as the train was passing through the tunnel, the wheels of the locomotive began to slip and stalled the train. When the engineman endeavored to take up the slack, a coupler on the seventy-third car broke and stopped the train. While the train was stalled, exhaust fumes from the locomotive asphyxiated the five persons and the three hundred steers and sparks from the locomotive stack set fire to the locomotive. Although the train was stalled at 1 a. m. it was not until the following afternoon that the broken coupler was replaced and the train was pulled back into the open with the locomotive still burning.

### **N. R. A. A. Moves Exhibit**

The National Railway Appliances Association will present its thirty-first annual exhibit in the 122nd Field Artillery Armory, 234 East Chicago avenue, (one block east of Michigan boulevard) Chicago, on March 16-19, 1942, coincident with the convention of the American Railway Engineering Association. This armory is much closer and more convenient to the A. R. E. A. convention headquarters in the Palmer House. Furthermore, it will be possible to house all of the exhibitors within one large area, an arrangement that has not been available heretofore in the International Amphitheatre where the exhibits have been held in recent years. It is anticipated that for these reasons the new quarters, which have become available only within recent months, will be received with favor by exhibitors and railway visitors alike. Inquiries received by Charles H. White, Secretary (Industrial Brownhoist Corporation, 208 S. LaSalle street, Chi-

cago) indicate that the number of companies which will participate in the exhibits will be considerably larger than in any recent year.

### **I. C. Seminole Derailed by Fissure at Corinth**

Two persons were killed and 80 were injured when nine of the twelve cars of the northbound Seminole of the Illinois Central were derailed and eight rolled down a 33-ft. embankment one mile south of Corinth, Miss., at 5:15 p. m. on November 23. The train was traveling between 40 and 50 m. p. h. when a transverse fissure caused the east rail to break. The locomotive and three cars at the head of the train and the rear truck of the last car remained on the rails. The eight intermediate cars all rolled down the embankment but were not seriously damaged. One of two diners caught fire and was completely demolished.

### **Gray Named Acting Solid Fuels Director**

The appointment of Howard A. Gray, until the present director of the Bituminous Coal Division of the Department of the Interior, as acting director of the Solids Fuels Coordination, was announced on November 21, by Secretary of the Interior Harold L. Ickes.

Appointment of Mr. Gray, the announcement stated, is in accordance with the President's action of November 5, directing that the "Secretary of the Interior act as solid fuels coordinator for national defense," and authorizing him to make provision for "an assistant to whom you may make the necessary delegation of functions."

### **200,000 Members of Armed Forces Moved by Rail in October**

Approximately 200,000 members of the nation's armed forces were moved by rail during October, according to the Military Transportation Section of the Association of American Railroads. This brings the number of service men carried by the railroads in the first ten months of this year up to a total of 2,227,196.

The October rail movement of the Army, Navy and Marine Corps was handled by transporting 98,483 men on 378 special trains and 100,856 on regular trains. There was no movement of the Civilian Conservation Corps personnel during the month, it was said. Thousands of furloughed service men traveled on the railroads in October, but these were not included in the announced figures.

### **October Export Traffic**

Cars of export freight, other than grain or coal, unloaded at Atlantic, Gulf and Pacific ports in October this year totaled 63,413 cars, the largest number unloaded in any one month since the compilation of these statistics began in November, 1939, according to reports compiled by the Manager of Port Traffic for the Association of American Railroads. This exceeded by 7,174 cars the previous high record established in September this year. In October, 1940, there were 47,559 cars un-



loaded. Cars of grain for export unloaded in October this year at these ports totaled 3,232 compared with 685 in the same month last year.

"No congestion or delay to traffic exists at any of the Atlantic, Gulf or Pacific ports, due to the cooperation of steamship lines, port authorities, exporters and shippers," the A. A. R. statement said.

### Steel Priorities Extended to December 31, 1942

General preference orders affecting pig iron, steel, steel warehouses, and special kinds of iron and steel have been extended to December 31, 1942, by the Acting Director of Priorities. All of them had been scheduled to expire November 30, 1941.

Most important of these orders, it is pointed out, is General Preference Order M-21, which puts steel under priority control. General Preference Orders M-17, M-21-a and M-21-b, which are also extended, cover pig iron, alloy steels, and steel warehouses. The orders also apply to inventories of any of these materials.

Another order also extended is Preference Rating Order No. P-31, which assigns limited blanket ratings of A-1-b and A-1-c to orders for certain materials essential to the operations of manufacturers of foundry equipment and repair parts. This order was extended to May 30, 1942.

### Model Railroaders Are Good Railroad Customers

The growing body of those who make model railroads their hobby constitutes a nucleus of steady passenger traffic for the railroads, according to the National Model Railroad Association. A recent check of registration at the association's annual convention in Peoria, Ill., last Labor Day week-end shows that 85 per cent of the 360 members registered at the convention traveled by railroad. Of the remaining 15 per cent, 9 per cent traveled by automobile and 2 per cent by bus. The remaining four per cent apparently walked. It is the belief of the association that most of those who came by means other than railroad actually live so close to Peoria as to make a railroad journey impracticable.

### The New Empire State Train Makes Press Run

The New York Central was host on November 25 to a party of 175 at a press run of one of the new Budd-built trains to be installed on Sunday, December 7, in the Empire State Express service between New York, Buffalo, Cleveland, and Detroit. The train departed from the Grand Central Terminal, New York, at 9:45 a.m. and was turned at Albany, N. Y., and arrived at the Grand Central Terminal on the return trip at 4:25 p.m. The party included New York Central officers, representatives of the Edward G. Budd Manufacturing Company and newspaper men. Among the special guests were Robert E. Butterfield, retired engineman, and Colonel Van Voorhees, retired conductor of the New York Central. Mr. Van Voorhees was a member of the crew of the Empire State Express on its first run on October

26, 1891. Luncheon was served in the dining cars en route.

### C. P. R. Employee Types Portrayed in Color on Post Cards

The Canadian Pacific has published a series of 48 post cards in color each depicting in portrait form a representative type of employee in various occupations on the system. The portraits are the work of Kathleen Shackleton, a well-known Canadian artist, who works in pastel.

Drawing her 48 subjects from a field of approximately 60,000 employees the artist confined her choice to those employees in the ranks whose uniform presents the "flavor" of their activities, ranging from



This Pastel Portrait of a C. P. R. Engineer is One of a Set of 48 Issued in Post Card Form By the Road Showing Employee Types and Drawn From Life by Kathleen Shackleton

hotel bellboys to sleeping car conductors. The cards measure 5½ x 3½ in. and are sold in two sets of 24 each, at 25 cents a set. They are on sale at all C. P. R. news stands and restaurants or through the general publicity agent, Room 318, Windsor station, Montreal, Que.

Miss Shackleton spent approximately eight months locating and choosing her subjects and committing them to her drawing board. During this period she travelled from coast to coast in order to get as complete a collection of types as possible. She was guided in her selection by representatives of the railway labor organizations and operating officers of the Canadian Pacific, who also contributed the descriptive footnotes.

### Representation of Employees

Results of recent elections in representation-of-employees cases have been announced by the National Mediation Board.

On the Houston Belt & Terminal the Board has made three certifications as follows: In one case the Brotherhood of Railroad Trainmen was chosen to represent the yardmasters; in another the Brotherhood of Locomotive Engineers won over the Brotherhood of Locomotive Firemen & Enginemen by a vote of 28 to 25,

thus establishing its right to represent the locomotive firemen, hostlers and hostler helpers; while in a third case by a vote of 23 to seven, the Brotherhood of Locomotive Firemen & Enginemen won out over the Brotherhood of Locomotive Engineers and was given the authority to represent the locomotive engineers.

In another case the Board has certified that the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees has been chosen to represent the clerical, office, station and storehouse employees on the Georgia.

### 1,100 at Dinner Where Apprenticeship Is Center of Interest

The shop apprentices of the Lehigh Valley at Sayre, Pa., are very much in the limelight. For the second time they have been given a prominent place on the program of the Shopmen's Annual Banquet, which was attended by more than 1,100 guests, including general officers of the railroad. After the dinner was served moving pictures were shown of a number of individual apprentices at work on their various occupations. Report cards were also thrown on the screen of many of those who are making noteworthy records in their school work.

The toastmaster was Henry J. Farr, a former past president of the System Shops Athletic Association. Doctor Donald Guthrie, chief surgeon, introduced President R. W. Brown, who congratulated the apprentices upon their good records and spoke in an intimate way about the problems of the railroad and the relations with its employees. This was President Brown's first formal appearance before the shop employees and his familiarity with and practical knowledge of working conditions made a deep impression upon the group. S. F. Pryor, of the Pan-American Airways, told of some of the interesting flights he has made recently in connection with the extension of the services of that company.

### South African System Rations Freight Cars

Since the available supply of freight cars is insufficient to meet shippers' demands the South African Railways & Harbours since August has established a system of rationing to distribute the available supply evenly among the users of railroad facilities. In addition the system has imposed restrictions on the loading of open-type cars in certain districts to insure a supply to coal mines. Other emergency measures have also been adopted to accelerate the turn-around of cars and maximum loading.

The general manager of the system points out that while shippers have given active co-operation, "the administration offers no apology for making a fresh appeal to its customers to assist in the expeditious release of vehicles." Among other things it is suggested that shippers keep open their premises on Saturday afternoons and holidays to take the delivery of goods and work as late as possible on ordinary weekdays.

The extraordinary increase in the volume of traffic in South Africa is due in

large measure to diversion of coast-wise shipping from the Cape route. Also, coal mine production in the Transvaal has reached an all-time high. There is an unusually heavy livestock traffic originating on the South-West Africa system. Even though the bulk of locomotive fuel coal for that system is loaded in cattle cars for inbound movement, nevertheless large numbers of empty cars of this type have to be handled.

#### Solicitor General Withdraws from I. C. C. Court Case

The Department of Justice, acting through the Solicitor General, has decided not to support the Interstate Commerce Commission in the latter's prosecution of an appeal to the United States Supreme Court in the Pacific Electric case wherein a special three-judge-court in the District of Columbia had held that the commission had the discretionary power to attach labor-protection conditions in abandonment cases. The commission had previously held that it did not have authority to attach such conditions in abandonment cases. Details of the court's decision were given in the *Railway Age* of March 15, page 491.

After the lower court decision the commission and the Department of Justice decided to appeal the case directly to the Supreme Court, and it was docketed and set down for hearing at this term. Then, on November 24 the new Solicitor General, Charles Fahy, asked the Supreme Court to dismiss the appeal as far as his office was concerned, thus leaving only the commission to prosecute it.

Inquiry at the Department of Justice threw no further light on the reason for the Solicitor General's action after his predecessor, the present Attorney General, Francis Biddle, had decided to appeal the

case. Counsel for the commission have indicated that they will go ahead with the case regardless of the Solicitor General's action.

#### Subcommittee Reports on Western Resources

Senator O'Mahoney, Democrat of Wyoming, from the committee on Public Lands and Surveys, has submitted a preliminary report of hearings held recently under authorization of Senate Resolution No. 53, which authorized a subcommittee to make "an investigation with respect to the development of the mineral resources of the public lands of the United States and laws relating thereto."

The testimony of W. M. Jeffers, president of the Union Pacific, and J. L. Haugh, vice-president, before the subcommittee at its initial session was noted in the *Railway Age* of July 26, page 173.

"Monopolistic control of mining industries has prevented the exploration and development of new sources of supply by centering the fabricating plants in the east," the preliminary report notes. "The result is it is now necessary to institute a vigorous research program to classify our known reserves in the west and determine which of them are most available to meet our present requirements. This is the most important step solely because it is necessary to those that follow. We need equally to provide the facilities of production and fabrication near the source of the minerals. In the past, the west had supplied minerals of relatively high value which could be economically shipped to eastern industrial centers. We now need not only this type of minerals but vast quantities of minerals of relatively low value."

"The industrial capacity of the east," observes the subcommittee, "already has been

proven inadequate to meet the needs of the moment. New plants are being built and many other new plants will be required. The west is an inexhaustible source of cheap power, both hydro and steam. Much of the labor that will be required is available there. In brief, the power and labor both can be obtained in the same locality that furnished the raw materials. This becomes increasingly important as the load upon our transportation facilities, already above normal, continually increases. Establishment of defense industries in the west supplied with the necessary cheap power can be located so as to serve the needs of the country after the present emergency is over. The building of more plants in the already overcrowded industrial centers of the east could not be expected to have any such result."

#### President Requests \$246,500 for Transport Study Board

President Roosevelt has sent to the Speaker of the House of Representatives a supplemental estimate of appropriation for the Board of Investigation and Research created by the Transportation Act of 1940, amounting to \$246,500, for the fiscal year 1942, to remain available until September 18, 1942. This amount would be in addition to the \$100,000 already received by the board for the remainder of the fiscal year ending June 30, 1942.

"In the first supplemental national defense appropriation act, 1942," wrote Budget Director Harold D. Smith in explaining the need for the request to the President, "\$100,000 was appropriated to enable the board to start the performance of the functions imposed upon it by title III of the Transportation Act of 1940, approved September 18, 1940. The original estimate was prepared before the board was established and therefore was not based on a definite plan. Since the members of the board have now been appointed, it is necessary to provide them with sufficient funds to develop their program and organization and to proceed with the studies which are indicated in the act. The estimate of \$246,500 herewith submitted will enable the board to pursue this program only through September 18, 1942, when the tenure of the board will have expired by law unless extended by Presidential proclamation."

#### Seeks to Become Air Freight Carrier

The Universal Air Freight Corporation has asked the Civil Aeronautics Board for authority to operate as a nation-wide air carrier of freight. A Delaware corporation with offices in New York City, Universal Air Freight is a subsidiary of the United States Freight Company, which owns several freight consolidating and forwarding companies, according to the application filed with the C. A. B.

The petition goes on to point out that Universal Air Freight has operated as a forwarding company through the Railway Express Agency. In the instant application it seeks authority to enter into direct agreements with existing air lines.

At present, it is further explained, Universal assembles shipments at terminal



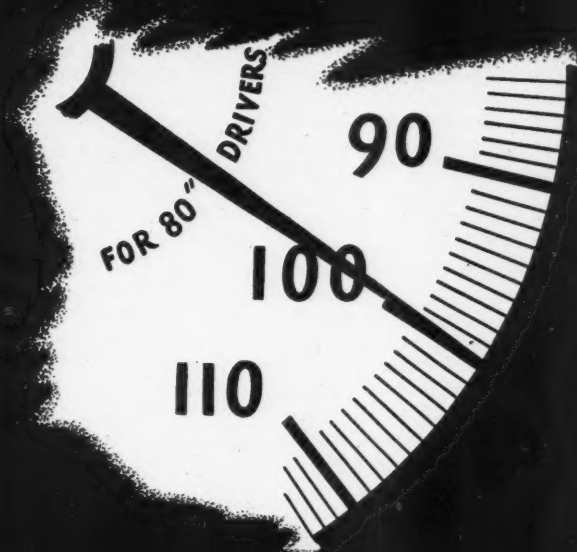
Getting the Passenger's Viewpoint

Paul Hodges is pictured catching brief stories of human interest from passengers going through Pennsylvania station, New York. Here, perched between the rising and descending escalators leading from the concourse to the Seventh avenue entrance, he asks travelers their impressions of New York and how they enjoyed their trips on the Pennsylvania. Mr. Hodges is on the air every Monday, Wednesday and Friday from 9:30 to 9:45 p. m. (e. s. t.) over Station WMCA, New York, and every Monday and Friday from 10:45 to 11 p. m. over station WLW, Cincinnati, Ohio.

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*At*  
**100  
mph**



THE  
**FRANKLIN  
SYSTEM**  
OF  
**Steam  
Distribution**

Through The Franklin System of Steam Distribution it is possible to accomplish this with greater effectiveness than it is with the old piston valve and conventional valve gear. The result is a  $\frac{1}{3}$  increase in train load-speed capacity from eighty to one hundred miles per hour. By the application of poppet valves, which are an integral part of The Franklin System of Steam Distribution, larger intake and exhaust areas are secured which remove the restrictions that exist in the piston valve type locomotive. » » » The Franklin System of Steam Distribution will enable you to build either smaller locomotives with the same horsepower or the same size locomotives with even greater horsepower.



**FRANKLIN RAILWAY SUPPLY COMPANY, INC.** NEW YORK CHICAGO

In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

points, consolidates them into larger units and turns the shipments over to the R. E. A. Through the consolidation of shipments, it told the Board, it is in a position to charge its customers a lower rate than the applicable express rate for individual air shipments. The petition also declared that Universal had been unable to enter into direct arrangements with air lines because of the exclusive contract they have with R. E. A.

If permitted to enter into contracts with the air lines, the company asserted, it felt that its operations could be conducted more economically and at lower rates to the public. The petition concluded by saying that the company believed that the air express and freight fields have not been tapped to any great extent, and that by the development of these fields, it feels that the resultant costs of transportation of mail and passengers would be reduced substantially.

### Red Cap Hearing Resumed in Washington December 1

Resumption of a hearing on the ten-cents-a-bag system for red caps at 10 a. m. December 1, in Room 3229 of the Department of Labor Building, Washington, has been announced by Baird Snyder, acting administrator of the Wage and Hour Division, U. S. Department of Labor. Thomas Holland, director of the Division's research and statistics branch, will preside.

The session will cover the railroad terminals operated by the following companies: Washington Terminal, Washington, D. C.; Birmingham Terminal, Birmingham, Ala.; Atlanta Terminal, Atlanta, Ga.; Savannah Union Station, Savannah, Ga.; Jacksonville Terminal, Jacksonville, Fla.; Tampa Union Station, Tampa, Fla.; and Durham Union Station, Durham, N. C. Also under consideration will be the Pennsylvania and Baltimore & Ohio stations at Baltimore, Md., the Baltimore & Ohio station at Silver Spring, Md.; and the railroad stations of the Seaboard Air Line in the following cities: Clearwater, Fla.; Ocala, Miami, Tallahassee, Tampa, St. Petersburg, and West Palm Beach; Norlina, N. C.; Raleigh, Weldon, Hamlet, Southern Pines, and Wilmington. Camden, S. C., and Columbia; and Petersburg, Va., and Portsmouth.

Hearings have also been held in New York, St. Louis, Mo., and Chicago. Dates for a session in Dallas, Tex., will be announced later, according to Mr. Snyder.

### Emergency Board Reports on Detroit Express Dispute

Reporting this week on the dispute between the International Brotherhood of Teamsters and the Railway Express Agency over the representation of R. E. A. vehicle-department employees at Detroit, Mich., the three-man Emergency Board appointed by President Roosevelt on November 7 called upon unions to settle such jurisdictional quarrels themselves—"peaceably and without embroiling employers or interrupting service with consequent damage to public interest." As noted in the *Railway Age* of November 15, page 803, the Detroit controversy grew out of a jurisdictional dispute between the Team-

sters and the Brotherhood of Railway Clerks, (both American Federation of Labor affiliates), and the Emergency Board was appointed when the Teamsters, with 60 members on strike in Detroit, threatened to tie up express operations in eight other cities.

After the Emergency Board was appointed, the Detroit strikers went back to work, and thus the Board said that the issue from which the emergency arose has been settled—"temporarily at least." Meanwhile, its permanent settlement "remains a problem"; but the Board hopes that the unions involved will perform "their plain duty" and bring about such a settlement. The Board also suggested that there should be authority in the National Mediation Board, if it does not now exist, "to determine representation disputes in such cases locally, if they cannot be settled without strikes by the labor organizations themselves."

Members of the Board were: Royal A. Stone, instructor at the St. Paul (Minn.) College of Law, chairman; W. H. Tschap-pat of Falls Church, Va., retired major general of the U. S. Army; and M. P. Andrews, Baltimore, Md., editor, author and lecturer.

### Victorian Railways Combat Extra-Legal Truck Operations

The government-owned Victorian Railways (Australia) have succeeded in acquiring a measure of protection from motor truck competition by the Transport Regulation Act, but apparently truck owners are flourishing in spite of the restrictions put upon their operations and expansion. The existing law permits any person to carry his own goods "in the course of trade" anywhere throughout the state. There is evidence that this freedom is being used by many whose activities are distinguished only technically from those of common or contract carriers. The number of vehicles licensed as private carriers has been increasing at the rate of approximately 1,500 each year. By January, 1940, it had reached the figure of 21,136 vehicles, representing an increase of 56 per cent over the number registered in 1935. The annual report of the Victorian Railways Commissioners for June 30, 1941, points out that a large number of these vehicles are being used for long-distance haulage at the expense of railroad traffic.

The government-owned railroad continues to adhere to the policy of reducing rates to shippers who contract to give their business to the railroads (i. e., "Agreed" rates). This course of action has not succeeded in eliminating truck competition but has kept it within bounds. "At the same time it has to be realized that rate concessions, based only on the intensity of the competition in each particular place, are a very costly means of protecting the state's greatest asset. While the traffic regained has not involved a proportionate increase in expenses, because the railways have a margin of unused capacity, the fact remains that far greater effort than formerly must now be expended to earn a given amount of revenue.

"The cost of road competition appears to be altogether disproportionate to any

benefits which it confers upon a relatively limited section of the community, and we again wish to urge the need for legislation designed towards the use and also the protection of each transport agency in its economic field. The legislation should in our opinion embrace not only railway and road transport, but also commercial air services, in which important post-war developments may be expected.

"War operations in other parts of the world, as well as defensive requirements here, have been responsible for focusing attention anew on the paramount importance of railways as a means of transport. It is vital to our safety that the effectiveness of our system should not be impaired by prolonged heavy loss of revenue due to selective competition—injuring the community generally for the benefit of a small section."

### British Railroaders Save Foodstuffs in "Blitz"

In a recent "blitz" on a British town local employees of the London & North Eastern succeeded by courage and endurance in saving valuable foodstuffs from total destruction. High explosive and oil bombs fired a large railroad warehouse in which considerable quantities of foodstuffs were stored. The railroad fire prevention squad, in spite of injuries from glass and debris, brought their hoses into action within a few seconds of the first bomb falling, but the fire was, in fact, beyond their control from the outset. The agent in charge of the freight station arrived quickly on the scene and, realizing nothing could save the building, called for volunteers to take the switching locomotive into the blazing building and draw out the cars of fruit, vegetables, sugar, margarine, jam and other foodstuffs. The agent himself and the brakeman coupled up the cars and in a very short time 70 to 80 were rescued from the building and adjoining sidings, only those which were imprisoned by fallen masonry being left.

While these operations were under way, many of the staff had rushed from their homes to render any service required. Some of these men, led by a truck driver and a loader, descended to the basement and drove a number of the company's motor vehicles through a road tunnel to safety. Before all the vehicles could be removed, the whole front of the building collapsed into the basement and blocked the entrance to the tunnel, through which alone road access is possible. The saving of these vehicles permitted early morning deliveries of fruit and vegetables according to schedule.

In the early hours of the morning a conference took place between L. N. E. R. district officers and Ministry of Food representatives to draw up plans to deal with the traffic arriving during the night for early morning delivery. Certain routes were blocked by bomb craters, but alternative railheads were arranged and the necessary diversions of trains, motor vehicles and staff were quickly made.

When dawn broke consideration was given to the possibility of further salvage operations in the basement and on the ground floor. Falling debris and the fire



blocked entry for some time, but immediately it became possible to enter the building a detailed exploration was undertaken. The conditions were most difficult, but in spite of thick smoke, three-feet of water in places, floating wooden floor blocks, danger of falling roof and the risk of stepping into the pits of the turntables for cars (typical of British freight houses) the situation was analyzed.

It was not long before cases of hams, condensed milk, confectionery, etc., had been handled to safety from the basement and the ground floor by the railroad staff, later assisted by troops. Motor vehicles and cars were also transferred from a dangerous position near the collapsed and still burning end of the basement to a safer place at the other end. Temporary cables were laid from a sub-station to enable one of the car elevators serving the basement to be brought into use and L. N. E. R. Air Raid Protection trailer pumps were able to keep down the level of water in spite of the constant flow from the many fire hoses still playing on the building. The car transfer-table (similar to those in big American car shops) at times several inches under water, was worked by hand, and temporary lighting cables were laid by the railway electrical department. (This information was sent *Railway Age* by George Dow, information agent, L. N. E. R. through the British Press Service, New York.)

### October Truck Volume Reaches New All-Time Peak

Following the normal seasonal trend, the volume of revenue freight transported by motor truck in October increased 6.9 per cent over September to reach a new all-time peak, according to American Trucking Associations. The October volume represented an increase of 19.9 per cent over October, 1940.

Comparable reports were received by A. T. A. from 201 motor carriers in 39 states. The reporting carriers transported an aggregate of 1,696,423 tons in October, as against 1,586,389 tons in September, and 1,414,910 tons in October, 1940. The A. T. A. index figure, based on the average monthly tonnage of the reporting carriers for the 1938-1940 period as 100, was 172.37. The index figure for September was 161.16.

Almost 85 per cent of all tonnage transported in October was reported by carriers of general freight. The volume in this category increased 5.2 per cent over September, and 22 per cent over October of the previous year. Transporters of petroleum products, accounting for almost six per cent of the total tonnage reported, showed an increase of 4.4 per cent over September, and an increase of 36.8 per cent over October, 1940. Movement of new automobiles and trucks constituted approximately 2½ per cent of the total tonnage reported. Tonnage in this class increased 129.3 per cent over September, but remained 9.9 per cent under October of last year. Haulers of iron and steel products reported four per cent of the total tonnage, the volume of these commodities increased 33.6 per cent over September, and held 32 per cent over October, 1940. Almost four per cent of the total tonnage

reported was miscellaneous commodities, including tobacco, milk, textile products, bricks, building materials, cement and household goods. Tonnage in this class decreased 8.2 per cent under September, and declined 18.6 per cent under October of last year.

### Freight Car Loading

Carloading figures for the week ended November 22 were not available at the time this issue went to press.

Loading of revenue freight for the week ended November 15, totaled 883,839 cars, the Association of American Railroads announced on November 21. This was an increase of 10,254 cars or 1.2 per cent above the preceding week, an increase of 138,544 cars, or 18.6 per cent, above the comparable 1940 week, and an increase of 116,852 cars, or 15.2 per cent, above the same week in 1939.

The summary for that week, compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading			
For Week Ended Saturday, November 15			
Districts	1941	1940	1939
Eastern .....	179,850	154,617	161,695
Allegheny .....	187,474	158,849	166,654
Pocahontas .....	58,390	49,291	52,903
Southern .....	126,524	108,302	105,619
Northwestern .....	133,012	98,429	108,427
Central Western .....	134,849	120,723	119,549
Southwestern .....	63,740	55,084	52,140
Total Western Districts .....	331,601	274,236	280,116
Total All Roads .....	883,839	745,295	766,987
Commodities			
Grain and grain products .....	40,297	29,999	36,897
Live stock .....	15,741	17,851	15,904
Coal .....	168,274	148,453	146,956
Coke .....	12,805	11,847	12,087
Forest products .....	43,267	35,814	35,612
Ore .....	57,934	37,944	45,635
Merchandise l.c.l. .....	156,278	150,273	158,028
Miscellaneous .....	389,243	313,114	315,868
November 15 .....	883,839	745,295	766,987
November 8 .....	873,585	778,318	781,588
November 1 .....	894,739	794,797	801,108
October 25 .....	913,605	837,657	829,358
October 18 .....	922,884	813,909	856,289

Cumulative Total, 46 Weeks .. 37,573,529 32,177,926 29,991,328

**In Canada.**—Carloadings for the week ended November 15 aggregated 67,773, as compared with 69,572 in the previous week and 55,594 last year, according to the statement of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
Nov. 15, 1941 .....	67,773	32,718
Nov. 8, 1941 .....	69,572	32,616
Nov. 1, 1941 .....	72,936	33,136
Nov. 16, 1940 .....	55,594	25,562

Cumulative Totals for Canada:  
 Nov. 15, 1941 ..... 2,820,804 | 1,373,018 || Nov. 16, 1940 ..... | 2,471,516 | 1,133,098 |
| Nov. 18, 1939 ..... | 2,253,083 | 985,653 |

### Railroads Complete Huge Troop Movements

One of the largest troop movements by rail in Army history has just been completed as an essential factor in the South Carolina maneuvers, the War Department has announced. Through forward planning of all transport problems and close cooperation between the commercial traffic

branch of the Quartermaster Corps and railroad officers, more than 8,600 officers and men and 738 carloads of freight, including hundreds of armored tanks and armored cars, were moved on schedule during a single week.

The average time of departure for 41 trains which left Camp Blanding, Fla., Fort Benning, Ga., and Camp Polk, La., during the week was two minutes and 48 seconds ahead of the schedule mapped out in advance. Arrival times at Edgmoor, Leeds, Rock Hill, Great Falls, Chester and Richburg, all in South Carolina, averaged just ten minutes ahead of schedule.

The troops moving between October 27 and November 2, under the supervision of the Fourth Corps Area Quartermaster, were:

First Armored Division from Camp Polk to Rock Hill—20 trains, 94 Pullman tourist sleepers, 20 kitchen-baggage cars, one box car, 509 flat cars, and 3,363 officers and men. More than 1,000 tanks and half-track scout cars were carried.

Second Armored Division from Sand Hill, Fort Benning, to Leeds—nine trains, 26 day coaches, nine kitchen cars, 177 flat cars carrying two tanks each and 1,082 officers and men.

Forty-third Division from Camp Blanding to Edgmoor—four trains, 44 day coaches, eight kitchen cars and 1,527 officers and men.

Thirty-first Division from Camp Blanding to Great Falls—six trains, 64 day coaches, 12 baggage cars, 12 kitchen cars, 2,452 officers and men.

Thirty-fifth Artillery Brigade from Camp Blanding to Chester—one train, three coaches, two baggage cars, one kitchen car, 27 flat cars carrying field guns and 122 officers and men.

One Hundred and Ninety-third Tank Battalion from Fort Benning to Richburg—one train, one coach, three box cars, one gondola, 20 flat cars carrying tanks and 46 officers and men.

The movement of the First Armored Division from Camp Polk to the maneuver area is reported to be one of the largest, if not the largest movement of its kind in Army annals. Because the Army requires its Quartermaster transportation officers to spread traffic among competing roads, several routes from Louisiana to South Carolina were used, varying in length from 995 to 1,206 miles.

On this movement only one train was seriously late, due to two cases of defective rolling stock. The train arrived at Atlanta four and one-half hours late but two hours of this was made up between Atlanta and Rock Hill. The train was given priority over the Southern main line because it was felt that a failure to make up the time might tie up civilian traffic on the road next day.

Of the other 19 trains used in the movement of the First Armored Division, nine reached their destination from 10 to 40 minutes ahead of time; three were checked in at Rock Hill on time. One train was 55 minutes overdue on arrival and the other five were less than half an hour late.

The 475-mile movement of the Second Armored Division was completed 64 minutes ahead of schedule. One of this Di-

# TWELVE MORE



## Pere Marquette Railway Company

WEIGHT IN WORKING ORDER, POUNDS				
On Drivers	Engine Truck	Trailer Truck	Total Engine	Tender 2/3 Capacity Loaded
277600	50900	Front 56000 Back 58000	442500	284800
Wheel Base			Tractive Power	Grate Area
Driving	Engine	Engine & Tender		
18'-3"	42'-0"	88'-2-3/4"	69350	90.3
Boiler		Cylinders		Diameter Driving Wheels
Diameter	Pressure	Diameter	Stroke	
87-15/16" OD	245 lbs.	26"	34"	69"

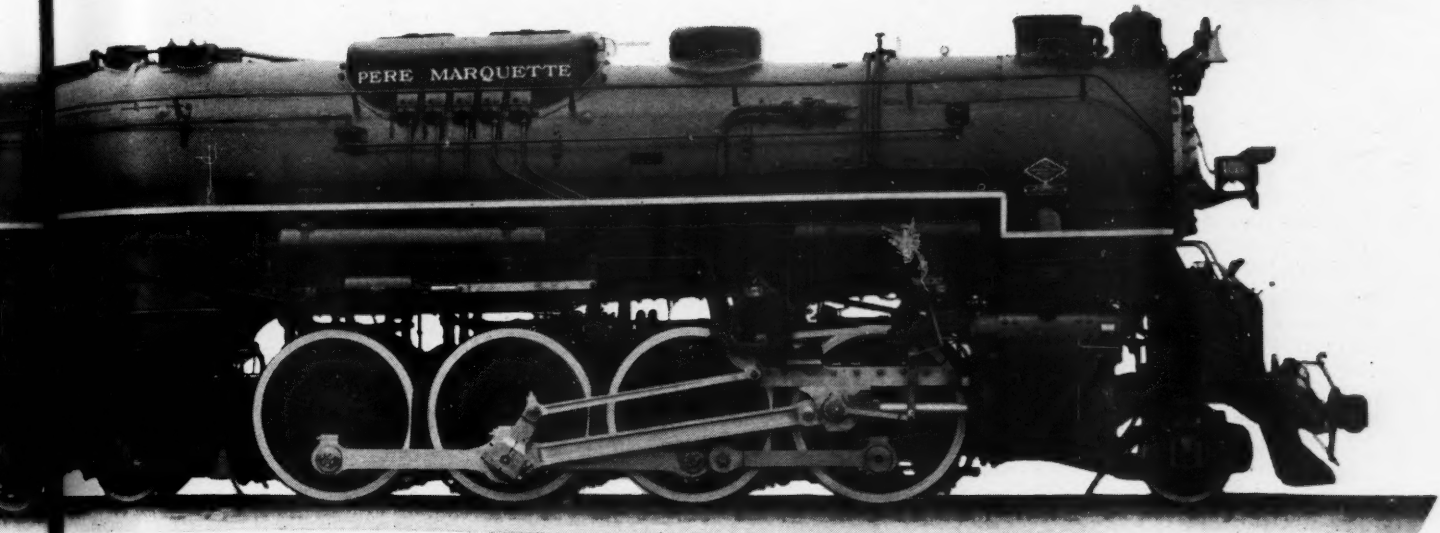


## LIMA LOCOMOTIVE



# 2-8-4's FOR

PERE  
MARQUETTE



One of twelve new high-speed, 2-8-4 type freight locomotives recently delivered to the Pere Marquette Railway Company by the Lima Locomotive Works, Incorporated. The excellent performance of the fifteen 2-8-4 type locomotives that were delivered to the Pere Marquette by Lima during the latter part of 1937 convinced the railroad that similar locomotives of this type would be the most economical and efficient means of augmenting their existing power to meet today's traffic demands.

WORKS, INCORPORATED  
LIMA OHIO

vision's nine trains was 74 minutes late. The delay was caused by the necessity of removing two tanks from a defective flat car at Atlanta, placing them on another car and cutting the car into the train. Two other trains of this movement were overdue, one 12 minutes and one 26 minutes. One train was on time and the remaining five reached Leeds, S. C., from 29 to 64 minutes ahead of schedule.

The single train of the One-Hundred Ninety-third Tank Battalion reached Richburg, S. C., 13 minutes before it was due. The train of the 35th Field Artillery Brigade left Camp Blanding 30 minutes early and maintained this lead until it arrived at Chester.

Among the 10 trains which carried the 31st and 43rd Divisions to maneuvers, only two were late, one 30 minutes and the other 20 minutes. Two trains reached their destination on time and the other six were checked in from five to 30 minutes ahead of schedule.

Captain Marion L. Bozardt, transportation officer for the Fourth Corps Area, said that the railroads "cooperated every inch of the way," adding, "This job we had to accomplish was undertaken by the roads and the Quartermaster Corps and all parties to the task stuck with it to make it an overwhelming success."

## Mansfield Reports Record Pork Bill

(Continued from page 924)

appropriations are expected to be requested of Congress until the present emergency is definitely over. The committee feels, however, that it would be wise public policy for the Congress at this time to authorize the projects in the bill in order to create a reservoir or backlog of sound public works which can be entered upon without delay when the time comes, both as a means of meeting the inevitable large unemployment problem and, also, to stimulate and promote the further material progress and economic development of our great country.

"In the opinion of the committee it is perfectly obvious that the only way by which we can meet the rising costs of government and the ever-increasing burden of taxation is to similarly increase the Nation's wealth production. The committee is convinced that nothing will make a more substantial contribution to that end than the development of our great water resources for all possible beneficial purposes, including navigation, flood control, irrigation, prevention of soil erosion and power development wherever any of these great services can be economically provided. Every project in the bill has been painstakingly studied and carefully considered. The bill, therefore, represents a broad and comprehensive program of internal development for the United States which in the committee's opinion will go a long way toward assuring the Nation's continued progress and growth throughout the years to come. The committee believes that the construction of these projects, when it is possible and wise to undertake them, will provide a great program of pub-

lic works which will not only pay large dividends to the American people in the service they will render, but which in every instance will prove self-liquidating."

"The prosecution of river and harbor improvement projects is definitely a good investment," the majority concludes. "No expenditure of public funds brings greater or more direct benefits to the American people than the money which we spend on our meritorious waterways. Dividends are paid to the general public in the way of reduced transportation costs which is reflected in lower commodity costs. These returns far exceed the maintenance costs with a better-than-average return on the investment."

Included in the list of projects authorized are the following: St. Lawrence seaway and power project, \$277,056,515; Florida ship canal, \$197,921,000; Beaver-Mahoning canal, \$48,179,000; Connecticut River between Hartford, Conn., and Holyoke, Mass., \$12,344,000; East River, New York City, \$34,509,000; Savannah River below Augusta, Ga., and the Clark Hill Reservoir, \$28,000,000; Tennessee-Tombigbee waterway, \$66,000,000; Neches and Angelina Rivers, Tex., \$23,000,000, with a \$5,000,000 contribution from local interests; Mississippi River between the Ohio and Missouri Rivers, \$10,290,000; Illinois waterway and Indiana Harbor Canal and Harbor, Ind. and Ill., \$25,900,000; Snake River, Oreg., Wash., and Idaho, \$30,200,000; and the Umatilla Dam on the Columbia River in Oregon and Washington, \$49,470,000.

It should be noted that of the larger projects, the St. Lawrence and the Florida Ship Canal have defense endorsements, but that the committee report notes none for the Beaver-Mahoning canal.

The special minority report disapproving the St. Lawrence project reached the conclusion that the project is economically unsound and not necessary to the national defense and that it should not be undertaken at this time. In the special report disapproving the Beaver-Mahoning waterway, it is declared that "evidently, the Army heads do not favor this project as a defense measure as, otherwise, they would have spoken in its behalf. Army engineers now say it is feasible, and—with obvious hesitation—recommend its construction for reasons which are economically unsound. At any rate, none of those reasons is or could be a military or a defense reason because the project is not even remotely related to defense."

The concluding minority report on the entire bill takes up the contention of the majority that the measure is merely an authorization and that it makes no appropriation. "This contention," the minority says, "is not well taken. Authorization is the first step to appropriation. If appropriations are not to follow, no defense can be given to making the authorization. Let no one be deceived."

## Forwarder Bill Conferees Are Appointed

The Senate and House have named their respective conferees to iron out the differences between the two versions of the freight forwarder regulation bill which has

passed both houses. These differences were outlined in the *Railway Age* of August 23, page 322.

Named as conferees on the part of the Senate were Senators Wheeler of Montana, Truman of Missouri, and Hill of Alabama, Democrats, and White of Maine and Reed of Kansas, Republicans. Acting for the House will be the subcommittee of the House interstate and foreign commerce committee which considered the legislation, consisting of Representative Lea of California, Crosser of Ohio, South of Texas, Patrick of Alabama, Democrats, and Wolvertson of New Jersey, Holmes of Massachusetts, and Reece of Tennessee, Republicans.

During the discussion of the measure in the Senate, Senator O'Mahoney, Democrat of Wyoming, called that body's attention to the fact that the House-approved version of the bill contained a section which had the effect of granting forwarders an exemption from all federal statutes on account of any action taken prior to the enactment of the forwarder bill. Senator O'Mahoney went on to say that Assistant Attorney General Thurman Arnold had called his attention to this alleged "joker," and had written him a letter asking that this exemption be changed so that it would apply only to previous violations of the Interstate Commerce Act and not to all federal statutes. To adopt the latter version, said Mr. Arnold, would bar the Anti-Trust division from taking any action on several pending complaints alleging violation of anti-trust laws "by a number of freight forwarders arising out of their method of making rates through rate conferences or bureaus."

## Supply Trade

The Whitcomb Locomotive Company has awarded a contract for a one-story factory addition to its plant at Rochelle, Ill., to the E. L. Hallbauer Construction Company. The cost is about \$50,000.

Richard W. Torbert has joined the Oxweld Railroad Service Company, a unit of Union Carbide and Carbon Corporation, as assistant chief engineer, with headquarters in Chicago, effective December 1. Mr. Torbert was born in Ocean City, N. J., on December 1, 1902, and graduated in civil engineering from the University of Delaware in 1926. He entered railroad service in the engineering department of the Reading at Harrisburg, Pa., and since April, 1934, has served as supervisor of track at Philadelphia, Pa., and at West Trenton, N. J.

## OBITUARY

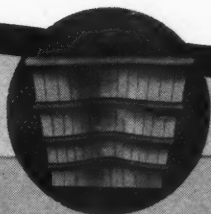
Clifford S. Stillwell, executive vice-president of the Warner & Swasey Co., Cleveland, Ohio, and president of the National Machine Tool Builders Association died of a heart ailment on November 19.

Continued on next left-hand page





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**S E C U R I T Y   C I R C U L A T O R   D I V I S I O N**

## Equipment and Supplies

### P. R. R. to Modernize 100 Passenger Coaches

The Pennsylvania will air-condition, renovate and completely modernize 100 additional passenger coaches at a cost of approximately \$3,500,000, as part of its continuing program for the improvement of its passenger-train equipment. The work will be carried out in the railroad's own shops at Altoona, Pa., and is expected to be completed so as to have the cars available for use in the summer of 1942. The first deliveries are scheduled for about the middle of April.

With these cars in service, the Pennsylvania will have a total of 643 modern air-conditioned passenger-carrying cars, provided with the most recent types of seating equipment and other appointments. The company also has 498 other passenger-carrying cars which have been improved with air-conditioning. In addition, 1,021 air-conditioned Pullman cars operate over its lines. The total air-conditioned fleet available for next summer's service will approximate 2,162 units. Fifty of the hundred additional cars to be modernized will be adapted to long-distance service, and will be equipped with reversible and adjustable reclining seats and spacious luggage compartments for the storage of heavy and bulky baggage on extended journeys. The cars will have a seating capacity of 68 passengers each. Ten other cars will be of the combined passenger-baggage type, with similar reversible seats for 36 in the passenger compartment. They will also be used in long-distance trains. Both the full length and combination cars will be streamlined.

For use in the high-speed electrified service between New York, Philadelphia, Pa., Baltimore, Md., and Washington, D. C., 30 cars will be equipped with high back rubber-cushioned reversible seats for 80 passengers each, while ten will be combined passenger-baggage cars with similar seating accommodations for 40 passengers.

All of the cars to be renovated and modernized will be equipped with tight-lock couplers and rubber draft gears for smooth starting and stopping, wide windows of double glass for unobstructed vision, insulation against heat and cold, and the newest types of cast-steel side frame trucks, provided with roller bearings.

### PASSENGER CARS

THE NATIONAL RAILWAYS OF MEXICO is inquiring for two 86-ft. business cars.

### LOCOMOTIVES

#### U. S. War Department Orders 50 Steam Locomotives

The U. S. War Dept. has ordered fifty steam locomotives of the 2-8-2 type for export to an unannounced destination under the lease-lend act. The order was allocated

as follows: 20 locomotives to the Lima Locomotive Works; 20 to the Baldwin Locomotive Works; and ten to the American Locomotive Company. The locomotives, which are designed for use on standard-gage track, will be fueled by oil, develop tractive efforts of 35,000 lb. each and, without tender, will weigh 205,000 lb. each. Boiler pressure is 200 lb.

The expected purchase of a total of 200 of these locomotives by the War Department was originally reported in the *Railway Age* of September 27. It is anticipated that orders for the additional 150 units will follow this original order, and that, complying with urgent instructions of the government, all the locomotives will be completed by the summer of 1942.

THE UNITED STATES WAR DEPARTMENT has placed a locomotive order with the Vulcan Iron Works at cost of \$57,000.

THE BRECON LOADING CORPORATION, Talladega, Ala., has ordered one 65-ton Diesel-electric locomotive from the General Electric Company.

THE UNITED STATES NAVY DEPARTMENT, Bureau of Supplies and Accounts, is asking for bids, December 2, on one 50-ton Diesel-electric locomotive for delivery to its submarine base, Conn.—schedule 9493.

THE UNITED STATES WAR DEPARTMENT has ordered one 65-ton Diesel-electric locomotive for delivery to the Raritan Arsenal, Metuchen, N. J., from the H. K. Porter Company.

THE CHESAPEAKE & OHIO has awarded a contract to the Bates & Rogers Construction Co. of Chicago for the construction of a new tunnel near Afton, Va., at estimated cost of \$1,500,000.

THE NATIONAL RAILWAYS OF MEXICO has placed orders for a total of 33 steam locomotives as follows:

- 11 Standard gage, 4-8-4 type—Baldwin Locomotive Works
- 6 Narrow gage, 2-8-0 type—Baldwin Locomotive Works
- 9 Standard gage, 4-8-4 type—American Locomotive Company
- 7 Narrow gage, 2-6-6-2 type—American Locomotive Company

Inquiries for this equipment were reported in the *Railway Age* of July 12 and July 19.

THE BESSEMER & LAKE ERIE has ordered four steam locomotives comprising two of the 2-10-4 type from the Baldwin Locomotive Works and two of the 0-8-0 type from the American Locomotive Company. The inquiry for this equipment was reported in the *Railway Age* of October 11.

### FREIGHT CARS

THE WEIRTON STEEL COMPANY will build 18 36-ft. steel frame flat cars of 50 tons' capacity in the company's own shops.

ALIQUIPPA & SOUTHERN has placed an order for 50 38-ft. 2-in. all-steel gondola cars of 100 tons' capacity for May, 1942, delivery with the company's own shops.

THE NORFOLK & WESTERN has placed an order for 25 31-ft. all steel covered hopper cars of 70 tons' capacity with the

company's own shops. The inquiry for this equipment was reported in the *Railway Age* of September 13.

THE NIAGARA ALKALI COMPANY has placed an order for ten all steel tank cars of 40 tons' capacity for 1942 delivery with the American Car & Foundry Co.

THE ALUMINUM COMPANY OF AMERICA has ordered three steel transfer cars of 90 tons' capacity from the American Car & Foundry Co.

THE MONONGAHELA CONNECTING has ordered 35 38-ft. all-steel gondola cars of 120 tons' capacity for May, 1942, delivery from the company's own shops.

THE WARREN PETROLEUM CORPORATION has ordered 20 40-ft. 6-in. all-steel tank cars of 50 tons' capacity from the American Car & Foundry Co.

## Financial

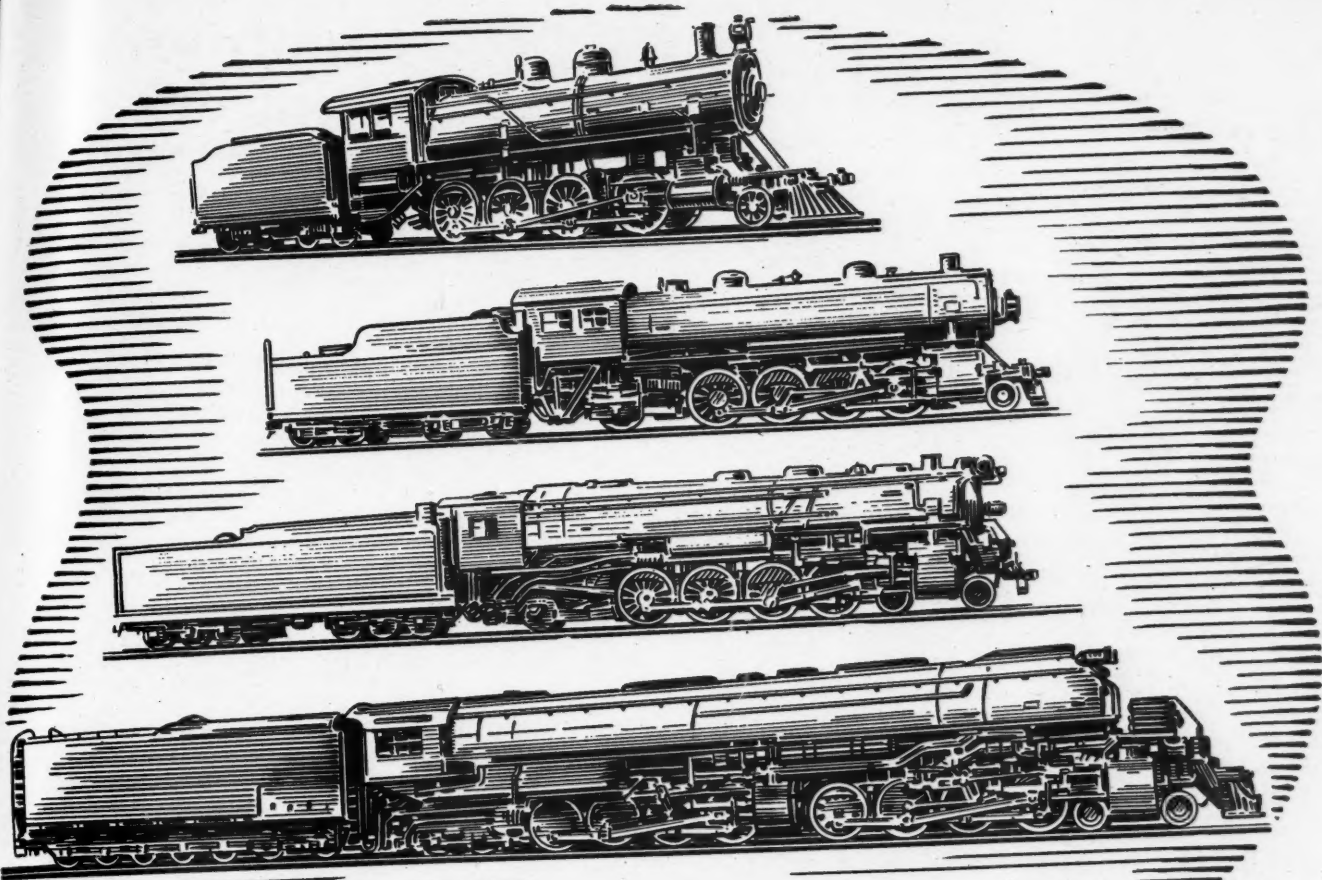
ATCHISON, TOPEKA & SANTA FE.—*Lease*.—The lease by the Los Angeles Junction of property of the Los Angeles Union Stock Yards used in loading and unloading livestock has been approved by Division 4 of the Interstate Commerce Commission. The action of divorcing the loading and unloading operations from the Stock Yards was taken to carry out the findings of the commission in the recent case involving the status of public stock yard companies in which that agency found, among other things, that the status of the stock yards company to be that of a common carrier by railroad insofar as it performed the service of loading and unloading livestock moving in interstate commerce.

CENTRAL OF GEORGIA.—*Abandonment*.—This company has asked Interstate Commerce Commission authority to abandon a line extending from Statesboro, Ga., to Metter, 19.5 miles.

CHESAPEAKE & OHIO.—*Joint Control of the Wheeling & Lake Erie*.—This company has been authorized by Division 4 of the Interstate Commerce Commission to acquire joint control with the New York, Chicago & St. Louis of the Wheeling & Lake Erie through the purchase from the Nickel Plate of certificates of deposit representing the beneficial interest in 115,193 shares of prior lien stock of the Wheeling company. Originally, as pointed out in the *Railway Age* of October 11, page 597, the C. & O. proposed to purchase only 95,183 shares, and the Nickel Plate planned to offer 20,000 shares publicly, but sealed bids revealed that the offers were too low, and they were rejected. As a result, the C. & O. offered to purchase all the shares at \$96 a share.

The Nickel Plate will use the proceeds from the sale of the certificates of deposit, together with funds to be obtained from other sources, for the purpose of redeeming the \$16,000,000 of collateral trust notes maturing August 1, 1946, and for which the certificates of deposit and other securi-





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This highly specialized experience is at your disposal . . . use it when you are considering new locomotives and profit from our experience.



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EXHAUST STEAM INJECTORS • PYROMETERS

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THE SUPERHEATER COMPANY, LTD.

A-1455

November 29, 1941

ties are pledged with the Central Hanover Bank & Trust Company.

**CHICAGO, AURORA & ELGIN.—Equipment Trust Certificates.**—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for \$310,000 of four per cent equipment trust certificates, maturing in monthly installments of \$6,500 for the first 12 months and \$8,000 for the succeeding 29 months. Details of the issue were given in the *Railway Age* of August 16, page 295.

**CHICAGO, BURLINGTON & QUINCY.—Abandonment.**—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon a line of railroad extending from Prague, Nebr., northwesterly to the end of the line at Schuyler, 18.8 miles.

**CHICAGO, ROCK ISLAND & PACIFIC.—Abandonment by the Choctaw, Oklahoma & Gulf.**—The Choctaw, Oklahoma & Gulf and the Chicago, Rock Island & Pacific, respectively, would be authorized to abandon a branch line and the operation thereof, extending from Tecumseh Junction, Okla., in a southerly direction to Asher, 25.2 miles, if Division 4 of the Interstate Commerce Commission adopts a recommended report of its Examiner M. S. Jameson.

**CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA.—Equipment Trust Certificates.**—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for \$1,210,000 of 2½ per cent equipment trust certificates, maturing in 10 equal annual installments of \$121,000 on December 1, in each of the years from 1942 to 1951, inclusive. The issue has been sold at 100.019 to Halsey, Stuart & Co., Inc., making the average annual cost to the company approximately 2.37 per cent.

**FLORIDA EAST COAST.—Equipment Trust Certificates.**—The trustees of this company have asked the Interstate Commerce Commission for authority to assume the liability for \$1,240,000 of three per cent equipment trust certificates previously assumed by the receivers on November 1, 1939, under the old equity reorganization procedure.

**MISSOURI PACIFIC.—New debtor's officer.**—Marion B. Pierce, who was elected a director of this road on November 6, as previously announced, has been elected also general counsel of the debtor corporation. In this post Mr. Pierce will have no connection with the operating company which is under the jurisdiction of the trustee, but will handle matters for the corporate organization, with headquarters in New York.

**NEW YORK CENTRAL.—Abandonment by the Mount Gilead Short Line.**—The Mount Gilead Short Line and the New York Central and its subsidiary, the Toledo & Ohio Central, respectively, have asked the Interstate Commerce Commission for authority to abandon the "long unused" portion of the main line of the Short Line and the operation thereof, extending from its connection with the Cleveland, Cincinnati, Chi-

cago & St. Louis at Edison, Ohio, to Mount Gilead, 1.2 miles.

**NEW YORK, CHICAGO & ST. LOUIS.—Pledge of Bonds.**—Division 4 of the Interstate Commerce Commission has modified its order of June 7, 1941, so as to permit this company to pledge and repledge from time to time to and including June 30, 1943, \$3,566,000 of extended Lake Erie & Western second mortgage five per cent bonds as collateral security for a short-term note in the face amount of \$2,400,000.

**NEW YORK, SUSQUEHANNA & WESTERN.—Operation Under Trackage Rights.**—This company has sought Interstate Commerce Commission approval to operate under trackage rights over a line of the Middletown & Unionville between Unionville, N. Y., and Middletown, 14.3 miles; and over a line of the New York, Ontario & Western between Middletown, N. Y., and Riverside Junction, Pa., 127.4 miles. The application states that the trackage rights are necessary so that the company can operate its Winton branch, extending from Sterrick Creek Junction, Pa., to Storr's Junction, 4.4 miles, upon the termination of a present agreement with the Erie whereby that carrier now operates the branch. The Susquehanna will pay both roads \$1 per train mile for the use of the lines.

**ST. LOUIS-SAN FRANCISCO.—Operation.**—This company has been authorized by Division 4 of the Interstate Commerce Commission to resume operations over that portion of the Empire branch extending from the Warrior River north to the end of the line, two miles, in Walker County, Ala. The line in question was acquired by this company in 1928 and was operated continuously until 1938, when, because of a shutdown of the only coal mine on the line, the commission permitted the company to abandon operation. Now, with a power shortage in the south, the coal company has decided to reopen the mine, thus necessitating the resumption of operations on the line.

**TIONESTA VALLEY.—Abandonment.**—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon as to interstate and foreign commerce its entire line extending from Sheffield, Pa., to Sheffield Junction, including the Clarendon and Tionesta Tannery branches, 14 miles.

#### Average Prices of Stocks and Bonds

	Nov. 25	Last week	Last year
Average price of 20 representative railway stocks..	28.89	28.03	30.90
Average price of 20 representative railway bonds..	64.82	64.41	60.43

#### Dividends Declared

Atlanta, Birmingham & Coast.—Preferred, \$2.50, semi-annually, payable January 1, to holders of record December 12.  
Atlantic Coast Line.—\$2.50, payable December 18, to holders of record November 29.  
Chesapeake & Ohio.—Preferred A, \$1.00, quarterly; Common, 7½¢, quarterly, both payable January 1 to holders of record December 5; Extra, 50¢, payable December 27 to holders of record December 5.  
Chestnut Hill.—7½¢, quarterly, payable December 4 to holders of record November 19.  
Erie & Pittsburgh.—87½¢, payable December 10 to holders of record November 29.  
Philadelphia, Germantown & Norristown.—\$1.50, quarterly, payable December 4 to holders of record November 19.

## Railway Officers

### EXECUTIVE

**A. L. Holton**, vice-president of the Interstate railroad, has been elected president, with headquarters as before at Andover, Va., succeeding **G. H. Gilmer**, deceased.

**Charles M. Kimball**, executive representative in the operating department of the Southern at Washington, D. C., has been assigned to the president's office.

### OPERATING

**W. C. Cheney**, auditor of the Sierra Railroad, has been appointed also assistant general manager, with headquarters as before at Jamestown, Cal.

**W. B. Bailes**, track supervisor on the Southern, with headquarters at Charlottesville, Va., has been promoted to trainmaster, with headquarters at Winston-Salem, N. C.

**Harold G. Watkins**, general superintendent and chief engineer of the Akron, Canton & Youngstown and the Northern Ohio, has been appointed chief operating officer, with headquarters as before at Akron, Ohio, a change of title. The positions of general superintendent and chief engineer have been abolished.

**Fred Hawk**, whose promotion to superintendent of transportation of the New York, Ontario & Western at Middletown, N. Y., was reported in the *Railway Age* of October 11, was born at East Branch, Delaware County, N. Y., on September 9, 1881. Mr. Hawk entered the service of



Fred Hawk

the New York, Ontario & Western on October 24, 1899, as trainman, being promoted to flagman on May 21, 1904. He became conductor on October 20, 1910, and assistant inspector of transportation on April 23, 1920. On April 1, 1929, he became trainmaster and on January 27, 1931, he was appointed assistant superintendent of the Scranton division, Mayfield yard. Mr. Hawk was promoted to superintendent of the Scranton division on August 1, 1936.

Continued on next left-hand page





## ON MODERN POWER

**T**HE quality of the wearing parts on modern power is of utmost importance.

Application of HUNT-SPILLER *Air Furnace* GUN IRON Wearing Parts will prevent many expensive delays, failures and heavy repairs.

Their resistance to frictional wear and high superheat temperatures will prove to be a big help in the promotion of economies effected by intensive operation, long runs, high speeds, short layovers and fuel economy programs. Complete installations insure the best results.

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Cylinder Bushings  
Cylinder Packing Rings  
Pistons or Piston Bull Rings  
Valve Bushings  
Valve Packing Rings  
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Crosshead Shoes  
Hub Liners  
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Floating Rod Bushings

**Finished Parts**

Dunbar Sectional Type Packing  
Duplex Sectional Type Packing  
for Cylinders and Valves  
(Duplex Springs for Above  
Sectional Packing)  
Cylinder Snap Rings  
Valve Rings All Shapes  
Light Weight Valves  
Cylinder Liners and Pistons  
for Diesel Service

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# HUNT-SPILLER GUN IRON

*Air Furnace*

with headquarters at Childs, Pa., which position he held until his recent promotion.

**Charles P. Cahill**, who has been handling special work for the Union Pacific for the past several months, has returned to his position as general manager of the Eastern district, with headquarters at Omaha, Neb., succeeding **A. L. Coey**, acting general manager, who has been appointed general superintendent of the Eastern district, relieving **B. F. Wells**, acting general superintendent. **F. P. Flesher**, assistant superintendent at Gering, Neb., has been transferred to Green River, Wyo., replacing **J. H. Gildea**, who has been appointed trainmaster of the Seventh subdivision, with the same headquarters. **V. J. Morduant**, a conductor, has been promoted to trainmaster of the Eighth subdivision.

**Thomas E. Brochu**, whose retirement as superintendent of the Southern, Northern and Utica divisions of the New York, Ontario & Western at Middletown, N. Y., was reported in the *Railway Age* of October 11, was born at Ferndale, N. Y., on February 18, 1879. Mr. Brochu entered the service of the New York, Ontario & Western on September 1, 1889, as messenger at Ferndale, working before and after school, week-ends and holidays. In February, 1893, he became extra telegraph op-



Thomas E. Brochu

erator and on September 28, 1895, he was appointed night telegraph operator at Liberty, N. Y. He became ticket agent and operator at Liberty on June 1, 1897, and dispatcher's copy operator on November 1, 1902, being transferred to the superintendent's office on July 1, 1905. Mr. Brochu was appointed division clerk on the Southern division on June 1, 1908, and trainmaster on that division on October 18, 1910. He became assistant superintendent of the Southern division on April 1, 1929, and superintendent of that division on August 1, 1936. On February 1, 1940, Mr. Brochu became superintendent of the Southern, Northern and Utica divisions, from which position he retired on October 1.

#### FINANCIAL, LEGAL AND ACCOUNTING

**Lawrence Chaffee**, whose resignation as commerce attorney of the Illinois Central, with headquarters at Chicago, was

reported in the *Railway Age* of November 22, has been appointed a general attorney for the Chesapeake & Ohio, the New York, Chicago & St. Louis and the Pere Marquette, with headquarters at Richmond, Va.

**Arthur F. Stinson**, whose promotion to general accountant of the New York, New Haven & Hartford at New Haven, Conn., was reported in the *Railway Age* of Oc-



Arthur F. Stinson

tober 25, was born at Naugatuck, Conn. He entered the accounting department of the New Haven on September 10, 1917, and served in various clerical capacities until November, 1925, when he was appointed general bookkeeper. Mr. Stinson was promoted to accountant on October 18, 1935, which position he held until his recent promotion.

**J. Ross Black, Jr.**, assistant auditor of disbursements of the Pennsylvania, with headquarters at Philadelphia, Pa., has been promoted to assistant comptroller, effective December 1. **Ira Foster Murphy**, assistant chief traveling auditor, succeeds Mr. Black as assistant auditor of disbursements at Philadelphia.

Mr. Black was born at Philadelphia in 1876 and after attending the public schools, entered the service of the Pennsylvania as a clerk in 1895. Following a number of



J. Ross Black, Jr.

promotions, he became a chief clerk and was later appointed works accountant at Altoona, Pa., from which position he was

appointed assistant auditor of disbursements.

#### TRAFFIC

**Reid M. Rowan**, district manager of perishable freight service for the Texas & Pacific at Los Angeles, Cal., has been promoted to general agent at San Francisco, Cal., succeeding **J. H. Dressen**, who has been appointed perishable freight agent at that point. **A. C. Tanksley**, general agent at Phoenix, Ariz., has been advanced to district manager of perishable freight service at Los Angeles, replacing Mr. Rowan and **E. H. Eisenhardt**, traveling freight agent at Kansas City, Mo., has been promoted to general agent at Phoenix, relieving Mr. Tanksley.

**Frank G. Cole**, whose promotion to general freight agent on the Atchison, Topeka & Santa Fe, with headquarters at Los Angeles, Cal., was reported in the *Railway Age* of November 8, was born at Dayton, Iowa, on April 23, 1888, and entered railway service on April 15, 1905, as a messenger in the general freight office of the Santa Fe at San Francisco, Cal. He served in a number of clerical positions and resigned on July 15, 1917. He re-entered service on October 15, 1917, as so-



Frank G. Cole

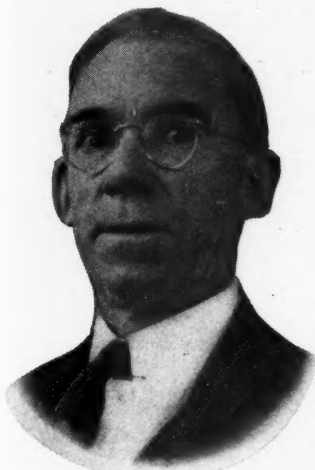
liciting freight agent at San Francisco and later held the positions of rate clerk, clerk in the import and export department, city freight agent and chief clerk. On July 1, 1928, Mr. Cole was appointed assistant division freight agent at San Francisco and on May 1, 1930 he was appointed division freight agent at Oakland, Cal. On June 1, 1940, he was transferred to San Francisco, where he was located until his recent promotion, effective November 1.

**Karl H. Suder**, general traffic manager of the Akron, Canton & Youngstown and the Northern Ohio, has been appointed chief traffic officer, with headquarters as before at Akron, Ohio, a change of title.

**Thomas Perfield**, whose promotion to freight claim agent of the New York, Ontario & Western and the New York, Susquehanna & Western was reported in the *Railway Age* of November 8, entered railroad service on August 1, 1899, as clerk and statistician with the Ontario Central Despatch Fast Freight Lines. He re-



mained with the latter until July 1, 1915, when he became special agent for the traffic department of the New York, On-



Thomas Perfield

tario & Western and on September 1, 1919, he was appointed special agent in charge of the newly-formed Claim Prevention Bureau. Mr. Perfield became special agent for the freight claim department of the New York, Ontario & Western on February 1, 1930, serving in that capacity until his recent promotion and also performing the same duties for the New York, Susquehanna & Western since March 1, 1940.

Edward J. Lillis, whose promotion to freight traffic manager in charge of rates and divisions of the New York, Ontario



Edward J. Lillis

& Western and the New York, Susquehanna & Western was reported in the *Railway Age* of November 8, was born in Brooklyn, N. Y., on March 23, 1892, and was educated in the parochial schools of that city. He entered the service of the New York, Ontario & Western on October 5, 1905, as clerk in the office of the vice-president. Subsequently he was transferred to the freight claim department, serving successively as stenographer, investigator, and chief clerk. From December 1, 1923 until 1937 he served as

freight claim agent and in the latter year he was appointed general freight agent in charge of rates, divisions and freight claims, which position he held until his recent promotion, also performing the same duties for the New York, Susquehanna & Western since March 1, 1940.

John F. Sullivan, whose promotion to passenger traffic manager of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Houston, Tex., was reported in the *Railway Age* of November 22, was born in Cincinnati, Ohio, on July



John F. Sullivan

27, 1879, and entered railway service on August 22, 1899, as a stenographer in the office of the superintendent on the Southern Pacific Lines in Texas and Louisiana. On March 10, 1901, he was appointed agent at Lake Charles, La., and on July 1, 1903, he was promoted to city passenger and ticket agent at Houston. On April 6, 1908, Mr. Sullivan was advanced to assistant general passenger agent, with the same headquarters, and in February, 1928, he was promoted to general passenger agent, which position he held until his recent promotion.

Louis R. Schramm, whose promotion to general freight agent on the Chicago,



Louis R. Schramm

Burlington & Quincy, with headquarters at Denver, Colo., was reported in the *Rail-*

*way Age* of November 1, was born at Chicago, Ill., on February 12, 1898, and entered railway service on the Burlington on May 13, 1915, as an office boy at Chicago, later serving in various clerical positions. In August, 1917, he was promoted to cashier and a year later he was advanced to ticket seller. Mr. Schramm was promoted to assistant ticket agent in May, 1925, and in July, 1927, he was appointed passenger agent. In September, 1935, he was promoted to city passenger agent at Chicago and in December, 1940, he was advanced to general agent at Philadelphia, Pa., which position he held until his recent promotion.

## ENGINEERING & SIGNALING

Raymond J. Pierce, assistant division engineer on the Erie at Hornell, N. Y., has been transferred to Salamanca, N. Y., to replace Louis M. Rossman, who has, in turn, been transferred to Hornell.

W. M. Stokes, engineer of the Equimalt & Nanaimo (leased by the Canadian Pacific), with headquarters at Victoria, B. C., has retired because of ill health.

C. Paul Schantz, whose promotion to assistant chief engineer of maintenance of way of the Eastern region of the Pennsylvania at Philadelphia, Pa., was reported in the *Railway Age* of November 8, was born on April 3, 1893. He was graduated from Drexel Institute in 1912 and entered railroad service with the Pennsylvania on October 1, 1912, as chairman on field sur-



C. Paul Schantz

veys and construction, becoming draftsman on December 1, 1912. Mr. Schantz then served in the office of engineer of bridges and buildings as supervising draftsman, designing engineer and office engineer, successively, becoming assistant engineer of bridges in 1930, the position he held until his recent promotion. From 1923 to 1927, Mr. Schantz was an instructor in major civil engineering subjects at Drexel Institute evening school. He is co-author of a book entitled "Bridge Engineering," published in 1931.

R. A. Emerson, roadmaster on the Canadian Pacific at Virden, Man., has been promoted to division engineer, with head-

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quarters at Brandon, Man., succeeding S. C. Wilcox, who has been transferred to Kenora, Ont., as reported in the *Railway Age* of November 22.

Henry C. Archibald, division engineer of the Portland division of the Boston & Maine, with headquarters at Dover, N. H., has been appointed acting engineer of track, with headquarters at Boston, Mass., to succeed Guy H. Watson, who has been granted a leave of absence. Harold S. Ashley, who was construction engineer in charge of the recently completed re-location project at the Birch Hill Dam reservoir, has been appointed acting division engineer of the Portland division, with head-

quarters at Dover, to succeed Mr. Archibald.

### OBITUARY

Lynden P. Green, who retired on April 30, 1941, as advertising agent of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Minneapolis, Minn., died suddenly on November 20 at St. Petersburg, Fla.

Charles S. Williston, general solicitor of the Pullman Company, with headquarters at Chicago, died suddenly of a heart attack in his office on November 22. Mr. Williston was born at Flushing, N. Y., on

July 21, 1871, and graduated from Grinnell College, Grinnell, Iowa, in 1893 and Northwestern University Law School in 1895. Mr. Williston was associated with John S. Runnells, who became general counsel, president and chairman of the board of the Pullman Company. On June 13, 1901, he entered the law department of the Pullman Company and in 1904 he was appointed claims attorney. In December, 1933, he was advanced to assistant general solicitor and on July 1, 1934, he was promoted to general solicitor. For many years Mr. Williston was active in the Association of Railway Claim Agents and served as president of that association in 1927 and 1928.

## Operating Revenues and Operating Expenses of Class I Steam Railways

Compiled from 133 Monthly Reports of Revenues and Expenses Representing 137 Class I Steam Railways

(Switching and Terminal Companies Not Included)

### FOR THE MONTH OF SEPTEMBER, 1941 AND 1940

Item	United States		Eastern District		Southern District		Western District	
	1941	1940	1941	1940	1941	1940	1941	1940
Miles of road operated at close of month	232,130	232,749	57,135	57,354	44,101	44,303	130,894	131,092
Revenues:								
Freight	\$411,240,755	\$316,147,932	\$171,772,083	\$130,593,935	\$77,205,728	\$59,773,361	\$162,262,944	\$125,780,636
Passenger	43,521,277	36,093,829	22,982,815	20,009,353	6,407,050	4,369,941	14,131,412	11,714,535
Mail	8,701,764	8,022,612	3,200,758	3,087,155	1,488,139	1,319,822	4,012,867	3,615,835
Express	5,725,947	5,342,068	2,572,798	2,473,413	860,480	873,201	2,292,669	1,995,454
All other operating revenues	19,789,157	17,107,874	9,515,121	8,098,189	2,212,135	1,993,501	8,061,901	7,016,184
Railway operating revenues	488,978,900	382,714,515	210,043,575	164,262,045	88,173,532	68,329,826	190,761,793	150,122,644
Expenses:								
Maintenance of way and structures	56,022,630	45,739,460	23,251,708	18,350,512	9,145,841	8,026,511	23,625,081	19,362,437
Maintenance of equipment	83,152,521	68,410,234	38,892,318	31,488,015	15,349,371	13,113,810	28,910,832	23,808,409
Traffic	9,070,887	8,660,110	3,319,746	3,150,770	1,759,259	1,662,016	3,991,882	3,847,324
Transportation—Rail line	148,959,907	123,391,071	67,570,014	56,173,414	23,779,887	19,844,284	57,610,006	47,373,373
Transportation—Water line	25,369	550,021					25,369	550,021
Miscellaneous operations	4,014,451	3,263,262	1,669,691	1,447,358	499,029	336,069	1,845,731	1,479,835
General	11,439,019	10,699,386	4,492,411	4,165,301	2,219,754	2,042,724	4,726,854	4,491,361
Transportation for investment—Cr.	395,860	473,883	40,809	104,095	54,048	95,085	301,003	274,703
Railway operating expenses	312,288,924	260,239,661	139,155,079	114,671,275	52,699,093	44,930,329	120,434,752	100,638,057
Net revenue from railway operations	176,689,976	122,474,854	70,888,496	49,590,770	35,474,439	23,399,497	70,327,041	49,484,587
Railway tax accruals	61,434,973	37,557,899	24,004,832	15,333,735	16,701,858	9,279,947	20,728,283	12,944,217
Railway operating income	115,255,003	84,916,955	46,883,664	34,257,035	18,772,581	14,119,550	49,598,758	36,540,370
Equipment rents—Dr. balance	8,306,796	7,674,418	3,860,843	3,895,360	485,682	451,244	4,931,635	4,230,302
Joint facility rent—Dr. balance	2,877,897	2,527,102	1,588,711	1,348,364	295,195	261,473	993,991	917,265
Net railway operating income	104,070,310	74,715,435	41,434,110	29,013,311	18,963,068	14,309,321	43,673,132	31,392,803
Ratio of expenses to revenues (per cent)	63.9	68.0	66.3	69.8	59.8	65.8	63.1	67.0
Depreciation included in operating expenses	18,470,562	17,275,541	8,028,289	7,521,930	3,824,709	3,459,644	6,617,564	6,293,967
Pay roll taxes	11,644,674	9,829,498	5,171,070	4,341,155	1,953,440	1,692,709	4,520,164	3,795,634
All other taxes	49,790,299	27,728,401	18,833,762	10,992,580	14,748,418	7,587,238	16,208,119	9,148,583

### FOR NINE MONTHS ENDED WITH SEPTEMBER, 1941 AND 1940

Miles of road operated at close of month†	232,263	232,892	57,226	57,378	44,166	44,309	130,871	131,205
Revenues:								
Freight	\$3,232,982,787	\$2,565,631,586	\$1,388,741,892	\$1,089,139,768	\$629,387,518	\$519,195,001	\$1,214,853,377	\$957,296,817
Passenger	378,069,203	311,719,145	194,966,498	168,475,875	63,631,460	44,862,196	119,471,245	98,381,074
Mail	77,580,672	72,583,755	28,721,135	27,807,518	13,301,669	12,380,789	35,557,868	32,395,448
Express	43,450,204	39,549,939	17,402,351	16,608,397	8,611,056	7,725,366	17,436,797	15,216,176
All other operating revenues	160,440,164	137,369,067	78,798,984	66,960,096	19,433,867	17,050,234	62,207,313	53,358,737
Railway operating revenues	3,892,523,030	3,126,853,492	1,708,630,860	1,368,991,654	734,365,570	601,213,586	1,449,526,600	1,156,648,252
Expenses:								
Maintenance of way and structures	430,627,364	373,909,443	174,992,439	144,502,837	75,271,096	69,440,201	180,363,829	159,966,405
Maintenance of equipment	711,378,597	605,441,724	331,711,212	271,606,294	132,094,537	119,606,112	247,572,848	214,229,318
Traffic	82,309,781	80,787,473	29,449,229	29,220,807	16,023,818	15,490,026	36,836,734	36,076,640
Transportation—Rail line	1,255,913,137	1,098,776,485	580,046,179	503,629,213	210,366,680	187,277,578	465,500,278	407,869,694
Transportation—Water line	3,082,847	4,893,244					3,082,847	4,893,244
Miscellaneous operations	33,771,285	29,076,421	14,483,299	12,713,308	4,863,255	4,030,338	14,424,731	12,332,775
General	100,172,137	98,066,928	39,493,298	39,092,338	19,476,733	18,902,353	41,202,106	40,072,237
Transportation for investment—Cr.	2,739,104	3,225,547	446,837	569,816	547,485	585,666	1,744,782	2,070,065
Railway operating expenses	2,614,516,044	2,287,726,171	1,169,728,819	1,000,194,981	457,548,634	414,160,942	987,238,591	873,370,248
Net revenue from railway operations	1,278,006,986	839,127,321	538,902,041	368,796,673	276,816,936	187,052,644	462,288,009	283,278,004
Railway tax accruals	425,008,845	297,823,137	181,051,213	125,219,443	106,025,172	67,947,194	137,932,460	104,656,500
Railway operating income	852,998,141	541,304,184	357,850,828	243,577,230	170,791,764	119,105,450	324,355,549	178,621,504
Equipment rents—Dr. balance	74,690,070	72,136,698	35,732,395	35,039,618	1,136,503	2,101,754	37,821,172	34,995,326
Joint facility rent—Dr. balance	24,968,191	24,673,594	13,637,800	13,708,933	2,770,937	2,494,369	8,559,454	8,470,292
Net railway operating income	753,339,880	444,493,892	308,480,633	194,828,679	166,884,324	114,509,327	277,974,923	135,155,886
Ratio of expenses to revenues (per cent)	67.2	73.2	68.5	73.1	62.3	68.9	68.1	75.5
Depreciation included in operating expenses	162,158,674	153,800,440	71,093,661	66,812,922	32,791,748	31,017,901	58,273,265	55,969,617
Pay roll taxes	97,441,622	86,220,705	43,393,336	37,820,576	16,838,375	15,424,595	37,209,911	32,975,534
All other taxes	327,567,223	211,602,432	137,657,877	87,398,867	89,186,797	52,522,599	100,722,549	71,680,966

\* Decrease, or other reverse items.

† Represents an average of the mileage reported at the close of each month within the period.

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.